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ABSTRACT

This proceedings document contains papers presented at the 25th anniversary meeting of the Council of Graduate Schools in the United States (CGS); information on the CGS business meeting, notices of awards presentations, copies of the CGS constitution and bylaws, and a CGS membership list. Topics and presenters are as follows: "Current Issues in Scholarship and Graduate Education in Languages and Literature" (Theodore Ziolkowski, Victoria A. Fromkin, and John M. Ellis); "Financing and Managing University Research Equipment" (Keith Kennedy; Ruben Lorenz); "Graduate Education for Teachers (Report of the Wingspread Conference Sponsored by CGS and AACTE)" (Mary Ann Carroll; Dale R. Comstock); "Off-Campus Graduate Education" (Lionel Baldwin); "Data Needs in Graduate Education" (Arthur M. Hauptman); "The Politics of Having Less" (Robert M. Rosenzweig); "Graduate Education In Retrospect" (John C. Weaver; Bryce Crawford); "Graduate Education Now" (Leslie B. McLemore; Elizabeth C.Traugott); "Minorities in Graduate Education--Past-Present-Future" (Sarah Melendez); "International Aspects of Graduate Education" (Victor Li; Norman Peterson); "State and Regional Initiatives in Graduate Education and Research" (William E. Davis; Ann Spruill); "Preparation of the Professoriate: Role of Graduate School" (John D. Kemper; Robert T. Voelkl); "Issues in Animal Research" (Richard C. Simmonds); "The Revised PHS Policy on Humane Care and Use of Laboratory Animals" (Charles R. McCarthy); "Redefining the President or Chancellor's Role in Graduate Education" (Charles Young); and "The Role of the Graduate School in Strengthening Undergraduate Education" (James H. Zumberge). Also included is an extract from the proceedings of the 1961 CGS annual meeting entitled "The Establishment of the Council of Graduate Schools in the United States." (LPT)

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*Proceedings of the Twenty-Fifth Anniversary Meeting*

# COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

THEME

## GRADUATE EDUCATION—
## Past—Present—Future

BEST COPY AVAILABLE

December 11-14, 1985
ANAHEIM MARRIOTT HOTEL
ANAHEIM, CALIFORNIA

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*Proceedings of the Twenty-Fifth Anniversary Meeting*

# COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

COUNCIL
OF GRADUATE
SCHOOLS IN THE
UNITED STATES
1985
CGS
25th ANNIVERSARY

THEME

## GRADUATE EDUCATION—
## Past—Present—Future

December 11-14, 1985
ANAHEIM MARRIOTT HOTEL
ANAHEIM, CALIFORNIA

edited by Edna M. Khalil

## CGS PRESIDENTS

Celebrating the 25th anniversary of the Council of Graduate Schools in the U.S., the first four presidents came together for this historic photograph. From the left are President Emeritus Gustave O. Arlt, who served from 1961-1970; Dr. Jules B. LaPidus, who became president in 1984; and Presidents Emeriti Dr. J. Boyd Page (1970-1978) and Dr. Micheal J. Pelczar, Jr. (1978-1984).
*Photo by CGS Photographer Emeritus Merna Foss Pelczar.*

## BOARD OFFICERS

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Vice President for Graduate
Studies and Research
University of Maryland

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# THE COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

## 25TH ANNIVERSARY MEETING

## PROGRAM

### WEDNESDAY, DECEMBER 11, 1985

### CGS ANNUAL PRE-MEETING WORKSHOPS

*Coordinator of Workshops:* Eric Rude, *Associate Dean of the Graduate School, University of Wisconsin-Madison*

**Academic Program Review and Evaluation**

This workshop will review policies and procedures for graduate program evaluation. Panelists will examine procedures used at institutions granting only master's degrees, as well as those offering master's and doctoral programs.

*Faculty:*

George E. McCloud, Acting Graduate Dean, Eastern Michigan University
Kenneth C. Zimmerman, Associate Graduate Dean, University of Minnesota

**Microcomputers in Graduate School Administration**

This workshop will address issues involved in the development of computerization, including hardware, software, and personnel. The use of microcomputers for record-keeping, degree audits, data analysis and networking will be discussed.

*Faculty:*

Dale R. Comstock, Graduate Dean, Central Washington University
Jean E. Girves, Assistant Graduate Dean, Ohio State University
Frank Goldberg, Assistant Graduate Dean, Northwestern University
Terry Mikiten, Associate Graduate Dean, University of Texas Graduate School of Biomedical Sciences, San Antonio
Christopher Oberg, Associate Graduate Dean, Claremont Graduate School

**Legal Issues**

This workshop will examine legal issues for the graduate dean, concentrating on due process, credentials fraud and plagiarism.

*Faculty:*

Elsa Kircher Cole, Assistant Attorney General, University of Washington

Gary Morrison, Managing University Counsel, University of California, Berkeley

**Graduate Student Services**

This workshop will explore the importance of providing an organized orientation program for graduate students as well as the benefits to be derived by both the students and the institution. Information will be shared on ways to organize staff and implement and evaluate the program. Materials to be provided for use in graduate student orientation programs.

*Faculty:*

George G. Karas, Associate Graduate Dean, Iowa State University

Paula S. Rudolph, Assistant Graduate Dean, University of California, Santa Barbara

Martha W. Tack, Professor and Coordinator of Graduate Studies, Dept. of Educational Administration and Supervision, Bowling Green State University

THURSDAY, DECEMBER 12, 1985

9:00 a.m.

**Welcome and Introduction**

**Plenary Session I**

**To Honor Gustave O. Arlt, First President of CGS**

**Current Issues in Scholarship and Graduate Education in Languages and Literature**

Victoria A. Fromkin, Vice Chancellor, Graduate Programs and Dean of Graduate Division, University of California, Los Angeles

John M. Ellis, Dean of Graduate Division, University of California, Santa Cruz

**Presiding**

Theodore Ziolkowski, Dean of the Graduate School, Princeton University

**Presentation of Gustave O. Arlt Award in the Humanities**

Gillian Lindt, Dean, Graduate School of Arts and Sciences, Columbia University

10:45 a.m.–12:00 Noon

**Concurrent Sessions**

1. **Financing and Managing University Research Equipment**

Keith Kennedy, Provost Emeritus, Cornell University

Reuben Lorenz, Vice President and Trust Officer Emeritus, University of Wisconsin

**Presiding**

Robert M. Bock, Dean, Graduate School, University of Wisconsin-Madison

2. **Graduate Education for Teachers (Report of Wingspread Conference Sponsored by CGS and AACTE)**

Dale R. Comstock, Dean of Graduate Studies and Research, Central Washington University

John Orr, Dean, School of Education, University of Southern California

**Presiding**

Mary Ann Carroll, Dean, School of Graduate Studies and Director of Research, Indiana State University

3. **Off-Campus Graduate Education**

Lionel Baldwin, President, National Technological University

William Spitzer, Dean of Graduate Studies, University of Southern California

**Presiding**

Vivian A. Vidoli, Dean, Division of Graduate Studies and Research, California State University, Fresno

4. **Data Needs in Graduate Education**

Arthur M. Hauptman, Director, Project on Graduate and Professional Education, Association of American Universities

Charles W. Daves, GRE Executive Program Director, Educational Testing Service

**Presiding**

Francis D. Horowitz, Vice Chancellor for Research and Dean of Graduate School, University of Kansas

12:00 Noon

**Luncheon**

**Speaker**

Robert M. Rosenzweig, President, Association of American Universities

***The Politics of Having Less***

**Presiding**

Jules B. LaPidus, President, Council of Graduate Schools

**The Establishment of The Council of Graduate Schools in the United States**
*(from the Proceedings of the First Annual Meeting, Council of Graduate Schools in the United States, Washington, D.C., December 14-16, 1961.)*

2:00 p.m.
**Plenary Session II**

**Graduate Education: Then and Now**

**Then:**

John C. Weaver, President Emeritus, University of Wisconsin System (Graduate Dean, University of Nebraska, 1961)

Bryce Crawford, Regents' Professor Emeritus of Chemistry, University of Minnesota (Graduate Dean, University of Minnesota, 1961)

**Now:**

Leslie B. McLemore, Dean, Graduate School and Director of Research Administration, Jackson State University

James Stukel, Dean, Graduate College and Vice Chancellor for Research, University of Illinois at Chicago

Elizabeth C. Traugott, Vice Provost and Dean for Graduate Studies, Stanford University

**Presiding**

Albert W. Spruill, Dean of Graduate Studies, North Carolina A&T State University

3:45-5:00 p.m.
**Plenary Session III**

**Reauthorization of the Higher Education Act**

Rose M. DiNapoli, Minority Legislative Associate, Subcommittee on Postsecondary Education, U.S. House of Representatives

Maryln McAdam, Legislative Associate, Subcommittee on Postsecondary Education, U.S. House of Representatives

**Presiding**

Thomas J. Linney, Jr., Director of Government and Association Relations, CGS

FRIDAY, DECEMBER 13, 1985

9:00 a.m.
**Plenary Session IV**

**Minorities in Graduate Education—Past-Present-Future**

Sarah Melendez, Associate Director, Office of Minority Concerns, American Council on Education

Howard Taylor, Director, Minority Graduate Education Research Program, Educational Testing Service

**Presiding**

Jaime Rodriquez, Dean, Graduate Studies and Research, University of California, Irvine

10:45 a.m.–12:00 Noon

**Business Meeting**

*Chairman's Report*

Robert E. Gordon, Vice President for Advanced Studies, University of Notre Dame

*President's Report*

Jules B. LaPidus, President, Council of Graduate Schools in the U.S.

*Resolutions*

*Other Business*

Joel West, Executive Director, National Graduate Fellows Program Fellowship Board

**Presiding**

Robert E. Gordon, CGS Board Chairman and Vice President for Advanced Studies, University of Notre Dame

12:00 Noon

**Luncheon**

**Presentation of CGS/UMI Distinguished Dissertation Award**

Keith S. Thomson, Yale University

**Presiding**

Robert E. Gordon, Vice President for Advanced Studies, University of Notre Dame

2:00-3:15 p.m.
**Plenary Session V**

**International Aspects of Graduate Education**

Victor Li, President, East-West Center, University of Hawaii at Manoa

Norman Peterson, Executive Secretary, The Liaison Group for International Educational Exchange.

**Presiding**

Volker Weiss, Vice President for Research and Graduate Affairs, Syracuse University

3:45-5:00 p.m.
**Concurrent Sessions**

5. **State and Regional Initiatives in Graduate Education and Research**

William E. Davis, Chancellor, Oregon System of Higher Education

Ann Spruill, Director of Special Projects, The Spangler Group, Boston, MA

**Presiding**

Aims C. McGuinness, Asst. Executive Director for Higher Education, Education Commission of the States

6. **Tax Legislation 1985: Reform, Problems and Possibilities**

J. Patrick Whaley, Partner, Musick, Peeler and Garrett, Los Angeles, California

**Presiding**

Thomas J. Linney, Jr., Director of Government and Association Relations, CGS

7. **Preparation of the Professoriate: Role of Graduate School**

John D. Kemper, Professor of Mechanical Engineering, University of California at Davis

Eugene Rice, Sociology Department Chair, University of the Pacific

Robert T. Voelkel, Vice President and Dean of the College, Pomona College

**Presiding**

Reuben Smith, Dean of the Graduate School, University of the Pacific

8. **Issues in Animal Research**

Richard C. Simmonds, D.V.M., Director, Department of Lab Animal Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland, and Treasurer, Scientists Center for Animal Welfare

Charles R. McCarthy, Director, Office of Protection from Research Risks, Office of Director, National Institutes of Health

**Presiding**

Barbara C. Hansen, Vice Chancellor for Graduate Studies and Research Designate, University of Maryland Graduate School, at Baltimore

SATURDAY, DECEMBER 14, 1985

9:00 a.m.
**Plenary Session VI**

**Speaker**

Charles Young, Chancellor, University of California at Los Angeles

***Redefining the President or Chancellor's Role in Graduate Education***

**Presiding**

Lee B. Jones, Dean, Graduate College, Executive Vice President and Provost, University of Nebraska

10:45–12:00 Noon
**Plenary Session VII**

**Speaker**

James H. Zumberge, President, University of Southern California

***From Specialist to Generalist: The Role of the Graduate School in Strengthening Undergraduate Education***

**Presiding**

David S. Sparks, Vice President for Graduate Studies and Research, University of Maryland

12:00 Noon
**Adjournment**

**The Council of Graduate Schools**
**in the United States**
**dedicates**
**the 25th anniversary**
**meeting to its**
**founding president**
**Gustave O. Arlt**

GUSTAVE O. ARLT
*Dr. Arlt passed away September 18, 1986 (ed.)*

# Plenary Session I

Thursday, December 12, 1986

TO HONOR GUSTAVE O. ARLT, FIRST PRESIDENT OF CGS

## CURRENT ISSUES IN SCHOLARSHIP AND GRADUATE EDUCATION IN LANGUAGES AND LITERATURE

*Presiding*: Theodore Ziolkowski, *Dean of the Graduate School,*
*Princeton University*
*Speakers*: John M. Ellis, *Dean of Graduate Division,*
*University of California, Santa Cruz*
Victoria A. Fromkin, *Vice Chancellor, Graduate Programs and*
*Dean of Graduate Division,*
*University of California, Los Angeles*

### Theodore Ziolkowski

It is a pleasure to welcome you this morning to a special Plenary Session honoring Gustave O. Arlt. Higher education in the United States has much reason to be grateful to Dean Arlt. As all of you know, he was the first president of CGS, which is celebrating its 25th anniversary at this meeting, and during his 10-year tenure he established our organization as a major national force in graduate education. It is probably less well known that he was also importantly involved in the establishment of another organization that is currently observing its 20th anniversary: the National Endowment for the Humanities. In a speech made in 1965 at the 5th annual meeting of CGS, President Barnaby Keeney of Brown University, who had just been appointed Director of the newly founded NEH, reported: "If any organization is responsible for the establishment of the Foundation, it is the CGS. If any individual is responsible, it is your president, Gustave Arlt, who labored tirelessly on and off Capitol Hill for the development and passage of suitable legislation. Gustave Arlt has done many useful things in his life and doubtless will do more, but perhaps this is the most significant thing he has done."

We therefore have many reasons to thank Gus Arlt, who celebrates another major anniversary this year: his 90th birthday. Gus Arlt, who has been called one of the true Renaissance men of our time, was born in Lock Haven, Pennsylvania, in 1895 and received his college and graduate education at the University of Chicago, where in 1931 he took a Ph.D. in Germanic languages and literature. Following appointments at De Pauw University and Indiana University, Arlt went to UCLA in 1935 as professor of German. He became Associate Dean of the Graduate

Division in 1950 and then served as Graduate Dean from 1958 until 1961, when he was chosen to become first president of this organization.

This morning I intend to spend less time on Arlt's administrative achievements, which are numerous and, as I have already indicated, of truly national significance. But it is the purpose of this session to discuss current issues in scholarship and graduate education in the fields of Arlt's academic specialization—languages and literature. From a *Festschrift* published in his honor in 1972 (*Graduate Education Today and Tomorrow*, ed. Leondard J. Kent and George P. Springer) I have learned a number of fascinating things about our founding father. As a student at the University of Chicago he not only played football under Alonzo Stagg but also won an AAU championship in fencing. He is a practicing musician, who once played oboe in the Indiana University orchestra and who is skilled enough on the organ to have given public performances. His passion for music inspired him to serve for twenty years as Director of Fine Arts Productions at UCLA and in 1948 to found and become first president of the Los Angeles Chamber Symphony Society. More recently Arlt has become an accomplished chef with tastes ranging from classic French *haute cuisine* to exotic cookery. "My kitchen library is so extensive," he noted in an interview, "that I had to have shelves built to house it."

Most apropos, however, is his talent for languages, which embraces not just the German he learned at home as a boy in Baltimore and the French that he mastered at an early age, but also the Latin and Greek in which he majored in college, the Italian and Spanish that he picked up in World War I and later in his new home in Southern California, and the Scandanavian languages both medieval and modern that he acquired for his graduate studies in Germanic folklore.

Arlt's scholarly publications cover an impressively wide range of topics, from Old Norse poetry and early European folksongs by way of German Baroque literature down to contemporary literature. Arlt no doubt reached the widest audience through his sponsorship of emigré German writers and intellectuals whom he met in Los Angeles, most notably Franz Werfel, whose works he edited and translated.

Although I had long been familiar with Arlt by reputation, I never had the privilege until this morning of meeting him or working with him. As I prepared for this tribute, however, I discovered that we have a great deal in common, in addition to the shared experience of music and athletics. (One major difference needs to be noted: the houseperson in my home will permit me into her kitchen only to plug in the electric kettle.) In another sense it is appropriate for the dean of the Graduate School at Princeton to be presiding on this occasion because it was one of my predecessors, Sir Hugh Taylor, who presided at the early meetings that established the CGS and recommended Dean Arlt for the presidency. Above all, however, I have the honor to preside today because I came to my deanship from the same background as Arlt himself—from the field of Germanic languages and literature. And it is in that connection that I finally claim a unique kind of personal relationship. For as it happens, the very first work of any length that I read in German was a novel by Franz Werfel, *Der Abituriententag*, that Gus Arlt edited with introduction, notes and vocabulary in 1948. The memory bears happy association for me because in the summer of 1949 I sat for an hour every day with my father, one of whose native languages was German, and read my way through that fascinating book. Several years later I had another similar opportunity. In the late fifties, when I was an instructor of German at Yale, the principal text for the second-year German course that I taught was another work that Arlt had edited—and which he had also translated for a very successful run on Broadway: Franz Werfel's great comic-tragic drama *Jacobowsky and the Colonel*. I went through that text so many times line by line with classes of Yale undergraduates that I still remember much of the dialogue by heart. I assure you that there can be no greater spiritual intimacy than that!

To talk to us this morning on two topics close to Gus Arlt's heart and mind we have absolutely the most appropriate people—two people, moreover, who for all their differences have a great deal in common. They are both graduate school deans. (That is not a given: if they had not been the most appropriate speakers, their deanships would not have gotten them onto the platform!) Both received their Ph.D.s in the same year, 1965—but in different parts of the world, UCLA and the University of London, respectively. Both are intensely active scholars, who continue in their decanal offices to write extensively and to speak widely on scholarly topics. Both, as I know from personal contact as well as from their writing, are tough-minded individualists who never hesitate to speak their minds openly, even when it flies in the face of accepted opinion. And both know how to talk about their scholarly fields in a public language devoid of jargon and pretentiousness. I am speaking of course of Victoria Fromkin, professor of Linguistics and dean of the Graduate Division at UCLA, and John M. Ellis, professor of German literature at the University of California at Santa Cruz and since 1977 Dean of the Graduate Division at his institution.

I am not going to take up our time by reciting to you the lists of their accomplishments: they are much too long. Let me simply remind you that Vicki Fromkin, Gus Arlt's successor as dean at UCLA, is currently president of the Linguistic Society of America, a fact that suggests the respect she has earned from her peers in such a variety of fields as phonetics, neurolinguistics, and speech errors. (My favorite among her titles is an article called "Tips of the slung—or to err is human.") In her capacity as president she submitted to the ACLS a report on the state of linguistics today that demonstrates her command and overview of the entire field. There is no other scholar in the country today who could talk to us more knowledgeably about developments in linguistics than my friend Vicki Fromkin.

### Victoria A. Fromkin

It is a great honor to have been invited to speak at this twenty-fifth Annual Meeting of the Council of Graduate Schools dedicated to its founding President, Gustave O. Arlt. It is also with humility that I represent UCLA as its present Graduate Dean; Gus Arlt served as the Dean of the UCLA Graduate Division from 1959 to 1962, after having first served as Associate Dean for eight years during the tenure of the distinguished physicist, Dean Vern Knudsen.

My presence on this platform today is not because Dean Arlt and I followed the same decanal path but because our research interests are related—his in German languages and literature and mine in the related field of linguistics. I am pleased to note that in addition we share an interest in Africa; Dr. Arlt's pioneering efforts on behalf of graduate education in Africa earned him an honorary LLD from the University of Ife in 1971; my interest was somewhat different—research on three dialects of Akan—Asante Twi, Akuapem Twi, and Fante—the major language of Ghana.

I am therefore assuming that these related academic interests led to my being asked to speak in this discussion on *Current Issues in Scholarship and Graduate Education in Languages and Literature*—not as a dean but as a linguist.

When Gus Arlt joined the UCLA faculty as Chair of the German Department in 1935 after having taught at Indiana University from 1931 to 1935 there was no Linguistics Department, although the interest in and research on human language and languages goes back at least as far as Plato's *Cratylus Dialogue*, the first extant treatise on the nature of human language. Given the theme of this meeting—*Graduate Education: Past, Present, and Future*—it might be of interest to see what linguistics and linguists were like in 1935.

The typical American linguist might well have had a strong background in anthropology, have been a good mimic who could hear distinctions between pairs of sounds that were probably not even present, was constantly surrounded by seventy-five shoe boxes filled with paper slips containing funny symbols representing words in a language that only he knew the name of and of which the last known speaker was no longer alive. You could often find him in the bush in Africa studying languages like Xhosa or Twi or Bambara or Zulu, or on an American Indian reservation working with speakers of Potawatami or Tubatalabal. He might also be interested in tracing the history of one or more languages back to the proto language.

Today it is hard to define a 'typical linguist'. Many of us still go into the bush to record and analyze languages never previously studied, or work on the history of sound change. At a cocktail party, when someone is introduced as a linguist and asked—as is inevitably the case—"how many languages do you speak?"—he or she will often after hemming and hawing answer "One I think" and then go on to explain that a linguist doesn't necessarily speak many languages—a polyglot speaks many languages—a linguist studies the nature of human language. The modern linguist often has a strong mathematical background, a disconcerting facility with erudite arguments about logical reference and the philosophy of meaning, and an ability to produce on demand a dozen examples of ambiguous sentences. Some linguists will tell you how many cadavers they have dissected in studying the physiology of speech, others will discuss Algol or Lisp or Fortran or Basic instead of Arabic, Amharic, or Mayan.

Language is such an important characteristic of the human animal that it is not surprising that linguistics has grown and developed and expanded and specialized into many sub (hyphenated) areas like theoretical-, historical-, computational-, mathematical-, socio-, anthropological-, psycho-, neuro-linguistics.

Not only is language an important human characteristic, there is mounting evidence that the human brain is uniquely suited for the acquisition and use of language. Chimps and gorillas and other primates may have greater nonlinguistic cognitive abilities than previously thought, but all the recent attempts to teach them human language have failed, despite what you see on your TV screens. Primate brains are unable to learn, even with intensive teaching and conditioned response techniques, one hundredth of the words (or signs) acquired by a three-year-old child, nor have they been able to learn the complex syntactic rules a child as young as two or three uses each time she talks to express happiness and sadness, to ask and answer questions, to play games, to listen to and to tell stories. Children, regardless of race, economic status, geographic location, climate, religion, or size, can acquire any language to which they are exposed without being specifically taught; no special talents or skills are needed. The highly intelligent (however intelligence is measured) do not learn language faster or better than seemingly less intelligent children. This is a remarkable achievement accomplished at an age when tasks requiring far less cognitive ability are unlearnable, which strongly suggests that language acquisition is genetically determined.

Further evidence for language as a genetically determined unique human ability is provided by the fact that wherever humans are found, language is found. Furthermore, there are no primitive languages—each language is equally complex and capable of expressing our conceptions of the universe. Leibnitz once remarked that all languages have grammars except for Chinese. He was wrong—there are no exceptions; Chinese, MickMack, Fula, Tiv, Icelandic, German, Ibo, Yoruba, Eskimo and Black English or any of the more than 4,000 languages of the world have grammars—equally complex, equally logical, equally capable of communicating the truth or telling lies, of expressing anger or making love, equally flexible and creative permitting a speaker to produce and understand an infinite set of sentences (never spoken or heard before).

As different as these languages may be, they are more similar than they are different. There are universal properties which are found in all languages. In the 13th Century, Roger Bacon expressed this notion when he said: "...A person knowing grammar in one language knows the grammar of all languages, except for accidental differences." Four hundred years later, Du Marsais expressed the same idea: "In a grammar there are parts which pertain to all languages; these components form what is called the general or universal grammar...In addition, there are parts which belong only to one particular language and these constitute the particular grammars of each language."

Linguistics in the past and in the present and, undoubtedly in the future, is concerned with discovering these universal properties, and in constructing a theory of universal grammar which will lead to an understanding of "what is a human language."

In recent years, important advances toward explicating the nature of language and language behavior have been attained. It was once widely believed that the grammatical properties of language derived from general cognitive, physiological, and neurological systems. It is now seen that human linguistic ability (or the grammar itself, which is the mental representation of linguistic knowledge—its units, sounds, words, rules of word and sentence construction) forms a separate autonomous modular system constrained by its own set of principles which, in its acquisition and use, interacts with other cognitive systems. This approach has led to new methods of investigation and promises new substantive results in the period ahead in the areas of research discussed below.

## Theoretical Linguistics

Theoretical linguistics and its subdivisions of syntax (the structure of sentences), phonology and phonetics (the sound patterns of language), morphology (the structure of words), and semantics (linguistic meaning) has in the past twenty five years been concerned with the nature of linguistic universals—those principles mentioned above which are common to all languages as a result of human biology. The goal of linguistics is to develop a theory of grammar, the abstract mental system representing a speaker's knowledge that permits one to speak and understand.

## Child Language Acquisition

That children are biologically 'prewired' for language acquisition, and that this is guided in part by highly abstract principles is illustrated by the rapid speed of acquisition, by the child's ability to produce and understand a boundless set of sentences never spoken or heard previously, and from the fact that even at very early stages of learning the language, the utterances children produce reveal complex and abstract rules and knowledge of syntactic sentence structure, phonology (the sound system) and semantics.

This cannot be explained simply as a process of imitation since the child produces utterances never heard before as is clearly shown by her mistakes. When a child says 'one mouse' and 'two mouses' this shows she has constructed the regular rule for plural formation; no one teaches her that "To form a plural add an 's' or 'es' to the singular form of the noun. (In fact, the rule is much more complicated; one adds an 's' sound to words like *cat, book*, and *map*, a 'z' sound to *dad, dog, bear*, and *bee* and a short vowel followed by a 'z' sound to nouns like *kiss* and *judge*.) The child may not (and probably has not) ever heard 'mouses'; even children of English professors say "I bringed the dolly in the house" showing they have constructed the regular past tense by generalizing from regular forms, before they have learned that some words are exceptions to these rules.

Furthermore, no one teaches the child the rules which tell her that the following sentences have multiple meanings (i.e. are ambiguous):

1. Jason wanted the golden fleece more than Medea.
2. Mr. Magoo made his wife turn on the barbeque spit.
3. The police were ordered to stop drinking after midnight.

whereas sentence 4 is not:

4. Jason wanted peanuts more than ice cream.

even though 4. and 1. appear to have the same structure.

The more we look at the structure of languages the more we recognize how very complex they are which would make children's acquisition of the complex grammar truly miraculous without a biological explanation. Just as birds are equipped to acquire the songs of their species, the human child is genetically equipped to acquire language.

The future research on child language should contribute to developing a viable theory of learning and will help resolve traditional nature/nurture controversies.

## Speech Perception and Comprehension

The area of linguistics concerned with real time linguistic processing, i.e. how we produce and understand speech is called psycholinguistics—the interface between psychology and linguistics. Since we all seem to speak and comprehend easily, we seldom think about what this entails. Every word, for example, must be identified by hearers from the more than 100,000 entries in their mental dictionaries in less than a third of a second and assembled into a sentence that corresponds to the meaning intended by the speaker. How do we do this? How, in fact, can we even determine the beginning and ending of a single word in the stream of speech? When we speak we do not pause between words—each word slops over and is connected to the next. How do we know that 'cat' has three 'sounds' when, as a physical signal it is one continuous sound.

Much ongoing and future research concerns such questions. New instrumentation and methods permit much more controlled studies of the speech process. We no longer have to depend on the good ear of phoneticians like Henry Higgins (or his real life counterpart, the English Professor of Phonetics, Henry Sweet); modern instrumentation and computers permit analysis of speech, pitch contours, pausal phenomena, onset time, etc. leading to new insights unimaginable fifty years ago.

## Neurological Aspects of Language

Interdisciplinary research among linguists, neurologists, and neuro-psychologists has led to the new field of neurolinguistics, which promises great advances in both linguistics and neurology. Aphasia (language breakdown after brain damage) research has reinforced basic concepts of theoretical linguistics such as the modular organization of the mental grammar. Localized damage to the left hemisphere does not lead to a general overall reduction in language ability but, to selective language disorders affecting different parts of the language system. Linguistic concepts are now used in hospitals by neurologists and neuropsychologists in the diagnosis and treatment of brain-damaged patients.

An illustration of how focal damage to the left hemisphere after injury or stroke is highly selective is shown by patients who retain their ability to speak and understand but show reading and/or writing difficulties. One group of 'acquired dyslexics' substitute words for those they are asked to read, where the errors are semantically similar, e.g. one patient read 'pixie' for *gnome*, 'sick' for *ill*, 'prison' for *jail*. Others may be able to read words like *tortoise* perfectly without being able to say what it means. Some 'agrammatic' patients speak fluently, but with little meaning, sometimes producing neologisms and jargon. For example, an aphasic physician when asked if he was a doctor said: "Me? yes, sir. I'm a male demaploze on my own. I still know my tubaboys what for I have that's gone hell and some of them go." Other patients speak slowly in telegraphic style omitting the 'function words'. On the other hand, most left-handed patients with damage to their hemispheres show no linguistic disorders, but do show other cognitive deficits such as the inability to recognize familiar faces or loss of spacial perception. Such differentiated, selective deficits reinforce the 'modularity of mind' concept.

The exciting new technology of neuroimaging techniques such as computerized axial tomography (CAT), magnetic resonance (NMR or MRI), and emission tomography (PET or SPET) now permit research never possible previously providing dynamic measures of the metabolic level or cerebral blood flow in the human brain during both language and nonlanguage activity. In fact, it is now possible to delineate the exact shape and location of both normal brain structures and of acquired or developmental lesions leading to language disorders.

Such neurological advances provide new research avenues for linguistics, in particular, for investigating universal vs. language specific elements and their neural substrates.

## Sign Languages

Traditionally, it was common practice to equate speech with language. Speech (production and perception) is behavior, the use or performance of those who know a spoken language; language is the abstract mental cognitive system that permits one to speak and understand. Language also underlies the ability of a deaf person to "sign" and to visually perceive and understand the gestures of a signing person. To equate speech with language is to obscure the nature of the linguistic systems that form the bases for all spoken languages and for all the sign languages used by communities of deaf persons throughout the world. As long as researchers concerned themselves only with spoken languages, there was no way to separate what is essential to the linguistic cognitive system from the constraints imposed, productively and perceptually, by the auditory-vocal modality—that is, to discover the genetically, biologically determined linguistic ability of the human brain. We now know, through the work of linguists conducting research on these sign languages, that their basic similarities to spoken languages are greater than their differences; that they are subject to the same constraints on their structures; and they they relate forms and meaning by the same kinds of rules. These findings therefore suggest that the human brain is organically equipped for language in any modality, and that kinds of languages that can be acquired are not determined by the motor or perceptual systems but by higher-order brain mechanisms. This is further shown in brain studies of normal signers and of sign language aphasia which reveal that the left cerebral hemisphere is dominant for sign language as well as spoken language. Continuing research on sign language in the immediate future will provide additional information on language universals and human biological linguistic capacities.

The above summarizes just a few of the new discoveries and research questions in the expanding linguistic discipline. I could also have detailed the ongoing research in AUTOMATIC SPEECH SYNTHESIS AND RECOGNITION which brings together linguists, phoneticians, and communication engineers, or work going on in the area of LANGUAGE PROCESSING AND ARTIFICIAL INTELLIGENCE within the sub-field called Computational Linguistics. Formal semantics and the philosophy of language continues to interest linguists as does basic research on social aspects of language use; sociolinguistics is the sub-field concerned with language in society. Applied linguistics is concerned with second language acquisition, and linguistics also has theoretical and applied relevance for understanding normal reading processes and developmental dyslexia.

Linguistics has come a long way toward the goal of explicating the nature of human language and in establishing the universal principles underlying the unique human ability to acquire and use language. Many have contributed to our understanding, among them those scholars who like Gustave Arlt have provided the specific language data to be explained by current theories. We have a long way to go and the future of linguistics is coupled with the future of all graduate education and research.

**Theodore Ziolkowski**

John Ellis recently published a widely discussed book (which has just been reissued in paperback) that competes with Vicki's article for wittiness of title: it is a critical, indeed skeptical, reappraisal of the role played by the Brothers Grimm in rewriting the tales in their famous collection and it is called: *One Fairy-Story Too Many*. However, John Ellis is here today not because of that book or his other studies of specific topics on German literature but rather for his 1977 volume on *Theory of Literary Criticism*, which displayed an admirable critical understanding of the range of literary studies today. As I learned at dinner last night, he continues to be so agitated by recent developments in literary studies that he is currently writing a new book on the subject, which he will complete as soon as he steps down later this year from his nine-year term as graduate dean.

**John M. Ellis**

## Literary Criticism: Where Next?

Whenever I am at a conference of graduate deans, I am always struck by the very broad range of disciplines that we individually represent, and that in turn leads to the thought that as deans we oversee exactly that same broad range of programs: deans of humanities or of engineering are, in their administrative work, never very far away from the disciplines in which they themselves were trained, but graduate deans have to make some sense out of what is going on in disciplines that are very remote from their own. To do so is, of course, by no means easy; but it is surely essential for us all to achieve a reasonable sense of where each field is going, and of where the most exciting work is likely to be in that field in the next decade, so that we can know what is worth supporting, and what is not, in the full range of programs that we administer.

Talks such as this one should presumably make a contribution to this goal by helping to make sense of literary scholarship as a field. But my task is somewhat complicated by the fact that literary critics themselves are just now having a hard time making sense of their field, and knowing where it is going. And this is probably not merely a temporary phenomenon; it is rooted in the fact that literary criticism does not work in quite the same way that most other fields do.

In most fields of study, a question as to where the really interesting new ideas in the field are at the moment would be answered by reference to new techniques and new areas of investigation. But it is a characteristic of most disciplines in the humanities that they proceed not by opening up new areas for investigation, but instead by continually brooding over the nature of the discipline itself; they tend to go over the same material with different attitudes, rather than new material with the same attitudes. In humanistic disciplines, scholars are constantly asking questions such as: What is history? or, What is philosophy? By contrast, few biologists ask what biology is—they just get on with their work. Literary scholarship is quintessentially humanistic in its behavior. The areas of study stay largely the same; it's safe to say that Hamlet's celebrated indecision will still be just as celebrated and just as much discussed in ten years' time. And literary scholarship displays the typical humanistic tendency to brood over its own nature; volumes entitled "What is Criticism" appear regularly and will certainly be appearing in years to come.

None of this, then, will change. On the other hand, it can be predicted with near certainty that attitudes to criticism itself will change because that kind of change has been occurring with regularity for some time. What will the likely course of those changes be? If we knew that, we should have some knowledge that would be very useful indeed—we should know where the field was headed, and that is the kind of knowledge graduate deans need. Unfortunately, it's knowledge that is very difficult to achieve. Predicting the course that criticism will take is in some ways like predicting the course of the stock market. It is clear that some things will gain in value and others will lose. In theory, prediction is a rational activity, which begins with mastering a great deal of information and analysis about the very real forces which are known to operate in the market; but somehow, the job of estimating which of the forces will get the upper hand and determine the outcome in a given situation seems to defeat even knowledgeable observers. That just about sums up the process of predicting the course of criticism, too. What, then, are the forces at work in the marketplace of criticism, and how do they operate? In the case of the market, hindsight allows a beautifully clear and cogent analysis of a situation which in prospect had baffled everyone, and criticism is similar in that respect too. It's easiest, therefore, for me to explain what the forces which produced the present situation seem to have been, and, since the forces themselves seem not to change, you will then have all the elements that need to be considered for a prognosis.

First, and simplest, there is the question of the ideologies which prevail in our society at any given time. I mean here not only political ideologies, but social and even religious ones too. The great works of literature are so numerous and varied that they are certain to touch on every aspect of human life. Because the range of material is so broad, any political or social ideology can find in literature some grist for its mill. Marxists, environmentalists, feminists, Freudians, Christians, conservatives and many other kinds of critics who are committed to particular viewpoints can all find plenty of things to talk about in literature, and to place at the service of their ideological concerns. Newer ideologies that have yet to arise will be able to do the same. To that extent we can with confidence expect to see new schools in criticism arise to reflect them. Here, then, changes in criticism will simply track other broader change in society. If we could predict the emergence of a new ideology in 1995, we could certainly predict a new critical stance to match; and similary, a decline in an existing ideology will be matched in criticism, too.

But, while recognizing that this is an important part of the enormous variety of criticism, I must confess that I find this part of the variety uninteresting. Ideological criticism is usually repetitive, and not really very good at dealing with things that literary critics should deal with, like, for example the specific qualities of a particular, unique text. Marxists tend to find much class injustice in the nineteenth century novel; and the eighteenth; and the seventeenth, and so on. The same result is found in a great variety of texts with different subject matter and different value as literature. Feminist critics, too, tend to see a single issue in a very broad range of texts—again, many fundamentally different texts but only one result. Good literary criticism is too much a matter of focussing on the unique content of individual texts for this to work very well; each text has its own concerns, and they must be dealt with individually and appropriately in each case. The inescapable fact is that there is an infinite variety of issues in literary texts, and when ideologically inspired critics collapse that variety into a single issue, the result is that they are unable to discriminate between dissimilar literary texts with very different concerns.

Still, as I said, ideological critics will always be with us; but the more central aspects of criticism are worth more of our attention. Here the forces which will operate to produce any future situation are more interesting, even though they seem not to change very much. To be sure, a shift in the balance of those forces occasionally produces the illusion that a radically new position has arisen. For example, *Newsweek*, some time ago reported the arrival of a bizarre new position in literary criticism known as "deconstruction;" through this and other sources in the popular media, the story has been transmitted to the general public of a strange war between traditional scholars and a newer group that says things which affront and even outrage traditionalists. (We academicians know, of course, that squabbles between traditionalists and iconoclasts are just the normal means through which we conduct our affairs—they are just our business as usual.) Among the bizarre assertions of this apparently revolutionary new group in criticism are, for example, that critics are more important and creative than the authors that they discuss; that the meaning of a literary text is completely open and indeterminate; that all interpretation is misinterpretation; that texts always imply the opposite of what they seem to say; and so on. The importance of this position may have seemed finally beyond doubt when the *Chronicle of Higher Education* recently quoted a leading critic as saying that deconstructive criticism was the wave of the future.

Well, all of this certainly looks like a radical shift in literary criticism, but in humanistic scholarship, sudden lurches into new directions generally involve far more continuity with the past than their inventors are willing to see. Even in the case of this seemingly strange new phenomenon, it is not difficult to see a somewhat more extreme formulation of familiar and very long-standing issues which have persistently separated critics. In fact, this new development is a good starting-point for an introduction to the forces which operate to produce the state of criticism existing at any particular time, because it represents little more than a heightened version of one of the most central and durable clashes of ideas in the history of criticism.

The simplest way to begin is to contrast two types of criticism with which everyone is familiar. Take, on the one hand, journalistic criticism, and on the other hand, a certain kind of solid, critical study on Shakespeare which presents research from obscure historical archives on the historical context and sources of the plays. Generally, the aims and assumptions of these two types are different in every way. Journalistic criticism aims to entertain, and to make good, stimulating reading; historical criticism aims instead to make a contribution to knowledge, to instruct. The former is usually an occasional piece, thrown out with the newspaper in which it appears, while the latter aims to have lasting value. The former is probably witty, the latter above all learned. In the former, the writer who is really the center of attention is probably the critic himself: *his* writing produces the feelings of appreciation or admiration in the reader, and that reader is more immediately aware of the fact that he is reading something stimulating by Leslie Fiedler, or by Frank Kermode, than he is of the literary author who may be the ultimate reason for the criticism. But in the case of the historically-oriented critical scholar, the name of the critic is overshadowed by the fact that our attention is focussed on the work of a great writer. The former kind of criticism has always tended to display the critic's personality, his values, his attitudes, even his prejudices; but the latter makes the personality of the artist the center of attention, and criticism is then about *his* values and his attitudes. Many other differences flow immediately from this one basic difference; one type tends to revel in being evaluative, in issuing weighty judgments which impose the critic's view on the world in resounding phrases, while the other is cautious, factual, and more expository than judgmental in character, simply setting out the results of research which seem not to depend on the personality of the critic. One side thinks of itself dealing in objective facts; the other is not at all dismayed to think of itself as subjective. The one is neutral, while the other is not only frankly opinionated, but takes the fact of its being opinionated as the really important and central part of criticism. Even in style these two poles are very far apart. The one can be sober to the point of pedantry, while the other is stylistically more flamboyant, which means that at its best it may show literary elegance, but at its worst degenerates into pretentiousness. The stylistic difference is understandable enough given the basic difference of aims. If the point of criticism lies in its immediate impact on the reader, it is really substituting for literature itself and starts to take on literary qualities; but if the aim is to contribute to knowledge, a style without literary pretensions is more appropriate. Another fundamental divergence can be seen in the way the two kinds talk about the impact of literature itself. The more subjective critic tends to concentrate on its emotional impact, its power to move, and its beauty of expression, while the more sober critic usually focuses instead in a quite different way on its intellectual content, so that literature then seems to be an exploration of situations and events in human life, rather than a source of aesthetic experience.

These are all very basic differences. Few fields have to deal with so broad a gulf between their various practitioners as those which separate the critic as personality and entertainer from the critic as scholar and commentator. One is really himself a performer, while the other only looks at the performances of writers and analyzes them. But what makes matters even more complicated is the fact that these are two poles in criticism rather than two separable and distinct groups of critics; in practice some critics combine different aspects of the two basic kinds, and so the number of different possible combinations of them is almost limitless. This is why the field of criticism can seem so disorganized, but it is also why it can find room for every conceivable shade of personality, from plodding archival researchers at the one extreme to visionaries at the other.

But understanding all of the ingredients in criticism is not the whole story. The field is not just an assemblage of different kinds of people and activities; there is a distinct logic in its recent history which becomes apparent as one looks at the way in which the balance between the two extremes shifts from time to time, so that distinctively new situations arise. The odd phenomenon known as deconstruction, for example, is also a coherent part of the history of competition between the two polar opposites in criticism. To understand how this competition finally results in what is happening now, and to get some sense of what may happen next, it is necessary to go back to a notably quiet and stable period in criticism earlier in this century. It is a remarkable fact that there was actually a single, consensus viewpoint in criticism at the start of the century, which managed to find a place for all of the various ingredients I have mentioned. No real choice between them was needed in this consensus model of criticism, because everything was fitted neatly into a synthetic overall view. The synthetic position went like this: there was an objective part of criticism; this placed the work in the context of the writer and his times. And there was a subjective part of criticism; this was the act of reading and responding to the work itself. This model had something in it for everyone. The critic had to bow to the facts in the one sphere, and therefore to rein in his own personality there. But, as if to compensate for this critical self-denial, once the sphere of biography and history was left behind, the critic was relatively free to indulge himself, and could react to the text in a more personal way. The rest of the contrasts between the two poles fitted in quite neatly. For example, the question of whether the critic's personality or the author's personality was central, was solved by making the author dominant in the biographical and historical aspects of criticism, but the critic central in the aesthetic model. And so the one half of criticism could be factual, and the other half flamboyant; the critic had to let the author emerge clearly in one place, but could let his own personality emerge in the other. Criticism of the early part of the century followed this synthesis faithfully for many years. Volumes of criticism were predominately organized as treatments of the life and times of an author, but they passed over at various points from sober exposition of historical and biographical facts surrounding literary texts, careful and scholarly in tone, to sudden outbursts of colorful prose which issued weighty judgments of the literary work and highly subjective reactions to them. Thus were the two poles combined. This consensus had a powerful grasp on the profession at least up to 1920, and it continued to predominate for some time after that; in non-English speaking countries it was still orthodoxy much later than in England and America, in fact right up to the 1960s. This was a remarkably stable solution, but, in retrospect, it had one glaring weakness: it had no room for rational discussion of what literary texts actually said. You could have rational discussion of the background of a work and of its author's personality and concerns, or subjective reactions to the work, but not any extended rational discussion of the issues in the work itself in its own terms. And so, the consensus was sure to unravel sooner or later.

The challenge to this consensus first began to emerge in Eastern Europe, but soon moved to take root in America; it is the movement known as the new Criticism. The New Critics disturbed the equilibrium of criticism as it had existed up to that time chiefly by questioning the way it had limited discussion of texts. They were not content with the notion that one reacted subjectively to texts, but could talk rationally and objectively only of the author's motives and background; they wanted instead to extend rational discussion to what the texts actually looked like and said. The New Critics were a sufficiently diverse group that it proved easy to attack the whole movement simply by isolating some of its less intelligent members, and because of this, various caricatures arose which still have some currency today. For example, it was accused of shutting out all knowledge of the world when reading a text in order to concentrate on the words on the page. The text and nothing but the text, was the jibe of its opponents. A similar caricature accused the New Critics of being concerned only with aesthetic response and not with social context and issues—though this objection was in reality a restatement of one part of the older consensus which the newer movement largely rejected. The point of the New Critics' resolve to dig deeper into literary texts lay of course in their rejection of the prevailing view that dealing directly with texts was only a matter of subjective response, that is, of aesthetics.

All of these caricatures missed the profound significance of what the New Critics were really doing: they were suggesting that extended rational discussion of what texts actually said was possible, and that it was not necessary to restrict oneself to personal responses; thus they were extending the realm of rational discussion in criticism beyond the background issues of historical and biographical context into the issues raised explicitly in the texts themselves. Direct analysis and discussion of texts was now to be regarded as a matter of knowledge and scholarship, not simply of taste and individual response.

One of the immediate consequences of this move was a celebrated argument about the author's intention. The New Critics' insistence that extended rational discussion of texts was possible, led them to devote relatively more attention to what a text said, and less to the few, usually fragmentary things its author had said about it. To the critics of the old consensus, this seemed extraordinary. If Goethe says his *Faust* means this or that, who are we, they thought, to ignore or contradict him? But that entirely missed the point. The New Critics were not really saying that they knew better than Goethe: their real point was that Goethe had said 10,000 lines worth of things in *Faust* itself, and only a few lines on the subject outside it, and that a sensible critic would make quite sure that he took his cues from the extended, complicated, and fully developed words and thoughts of Goethe which constituted *Faust's* text, rather than stopping his thoughts dead after he had read the few undeveloped, simplified and abbreviated authorial remarks Goethe made about what he had written. From the New Critics' point of view, the old consensus, in treating the author's remarks as an objective source, but making critical response to the literary text a subjective matter, had placed serious restrictions on the operation of critical thought and intelligence; those qualities could operate only on simplified, brief comments, but not on the far more complex and interesting language of literature itself. The old consensus had, in effect, placed a ceiling on rational thought in criticism; far too soon in the operations of criticism, it reached a barrier beyond which only a personal response was possible. The New Criticism broke down this barrier by insisting that rational thought could go well into the territory that had been placed off its limits by the old consensus.

Over the next forty years—perhaps up to the early seventies—a curious process occurred. The debate between the New Critics and the older consensus continued, but in a rather inefficient and misleading way. The great majority of critics kept up the attack on the New Criticism during this time, while in fact absorbing its agenda. The strange result is that the newer movement was victorious while it was being discredited. The underlying reality was that more and more critics began to analyze literary texts in a serious way, which in effect abandoned the older consensus. But this was achieved while the caricatured versions of the New Critics were relentlessly attacked, and the sheer weight of decades of these caricatures had the result first of making everyone begin to forget what the major thrust of New Criticism had really been, so that the distortion became reality, and then of making it seem so absurd to identify with the movement that, finally, no one would admit to being a New Critic anymore. While the New Critics might seem to have lost the argument, then, it was their agenda, not that of the defenders of the old consensus, which prevailed. Fewer and fewer tomes of "life and times" criticism were produced, and instead more and more really searching, analytical investigations of literary texts appeared. A quick look at any journal of criticism from the thirties shows an overwhelming preponderance of historical and biographical studies, with almost no extended analysis of texts; by the seventies, there was an equally overwhelming preponderance of textual analysis in the same journals. The New Critics had succeeded in extending the sphere of rational discussion in criticism; there had been a very real shifting of ground during these years.

But to return to the present, and the apparently bizarre recent phenomenon of deconstruction: how does this fit into the development of criticism? Well, any marked shift in a field increases some opportunities, and decreases others. As some things expand, others are under pressure to contract, and any pressure can produce sudden counter-pressures. The success of deconstruction in this country is, I think, best regarded as a powerful reaction to the pressure which certain parts of the field came under as the New Critical agenda was gradually adopted.

Remember that one possibility for criticism has always been the kind typified by journalistic criticism, in which the critic appears as a personality, as an entertainer, as a wit. In this style of criticism, critical writing itself is a virtuoso performance, designed to attract the reader's attention to the qualities of the critic, rather than to the qualities of the great writers he uses as his springboard. It is easy to see that the agenda of the New Critics had put pressure on this kind of criticism; slowly, the fulfillment of that agenda turned attention away from the critic, and towards the literary text. Criticism as a rational discussion of something else, as knowledge of something else, was putting a squeeze on criticism for its own sake, criticism as entertainment, or as projection of a critic's personality. The result is now a sudden backlash.

Like any outburst of something that has been constricted and under pressure, this one is somewhat violent and irrational. Deconstruction reasserts the primacy of the critic over the literary text, but does it more blatantly than has ever happened before; we had not previously seen an outright assertion that the critic rather than its author creates the meaning of the text. To be sure, one might have abstracted an underlying attitude of this kind in some older criticism, but not the fully explicit claim. The other parts of the backlash are similar; they are all restatements in more extreme form of that part of the critical spectrum which had been repressed by the steady movement of criticism towards analytical treatment of texts. The older view that critical responses to texts can only be subjective and personal is restated in the assertions that all reading is misreading, and texts mean whatever their readers want them to mean.

Looking beyond the extreme formulations, then, it is clear that this apparently revolutionary and shocking position is far from new. It is, in fact, essentially identical with one half of the old consensus—the half which said that response to texts could only be a subjective, individual matter. It was this aspect of the consensus which the New Criticism had constricted, and which now reasserts itself defiantly.

But now an interesting irony arises. The wildness of this latest critical position naturally makes it offend most of all the most conservative group among critics, though this is precisely the group that is still somewhat addicted to the older consensus; and yet the two share the view which was perhaps the most important prop of that consensus, namely the assumption that a critic's response to a text, if it cannot be guaranteed by biographical means, is a wholly individual matter. In this respect, both are equally opposed to the New Critics' decision to make this a matter of rational argument.

I began by expressing some general doubt about the possibility of predicting the future course of a field which seems to proceed through the shifting balance of the various forces operating in it, rather than moving steadily forward as understanding develops. Even so, it is impossible not to have an opinion about where things are headed, however much one knows in principle that prediction is probably quite hopeless. And so, without further quibbling, I will simply tell you what will happen next. The violence of the reaction against the long-term trend certainly indicates that it needs to be taken seriously, but the extremity of its formulation is likely to mean that it will be relatively short-lived. I expect to see criticism slowly, if with frequent detours, move further away from the model of the critic as performer, personality, intellectual sophisticate, and entertainer, and to keep moving towards rational, publicly discussable activity, in which argument back and forth between different viewpoints on texts, appeals to evidence for one against another, in short, the gradual and ceaseless process of carefully winnowing out notions that are promising from those that are not, slowly makes the dazzling but incommensurable individual critical display a thing of the past. At least, I hope so.

# PRESENTATION OF GUSTAVE O. ARLT AWARD IN THE HUMANITIES

*Presiding:* Gillian Lindt, *Dean, Graduate School of Arts and Sciences, Columbia University*

CGS President Emeritus Arlt congratulates Charles Martin as Mrs. Martin looks on.

The thirteenth Gustave O. Arlt Award in the Humanities was presented to Charles E. Martin. Dr. Martin is Assistant Professor of History at Alice Lloyd College in Pippa Passes, Kentucky.

Named in honor of the CGS founding president and an outstanding humanist, the Arlt Award honors a young American scholar who has made a significant contribution to a designated field in humanities studies and who has received a doctorate and published a significant book within five years of the date of the award. The award field for 1985 was Folklore.

A certificate and check in the amount of $1,000 were presented to Dr. Martin by Dean Gillian Lindt, Columbia University, chair of the award committee for his book, *Hollybush: Folk Building and Social Change in an Appalachian Community* published in 1984 by the University of Tennessee Press.

In its report, the award selection committee said:

> "Martin selected a topic that involves a theoretical question concerning cultural change in the extreme: that of the demise of a community; his method combines historical reconstruction and the study of folk craft and vernacular architecture. He presents his data as fully as he can and he researches his sources both in the library and in the field through personal and exemplary study of the demise of folk community, the reconstruction of its history, a description of its cooperative lifestyle and of the ways in which it succumbed to the economic forces of modern America. As a study in the Glasie-Vlach tradition it is to be recommended as a work whose romanticism, inherent in this type of research, in no way makes the book sentimental."

Dr. Martin is delighted to have Dr. Arlt autograph his book.

# Concurrent Sessions

## 1. FINANCING AND MANAGING UNIVERSITY RESEARCH EQUIPMENT

*Presiding:* Robert M. Bock, *Dean, Graduate School,*
*University of Wisconsin-Madison*
*Speakers:* Keith Kennedy, *Provost Emeritus,*
*Cornell University*
Ruben Lorenz, *Vice President and Trust Officer Emeritus,*
*University of Wisconsin*

*Information presented in this session was based on work reported in "Financing and Managing University Research Equipment," a report designed and coordinated by the Association of American Universities, National Association Of State Universities and Land Grant Colleges, and the Council on Governmental Relations, supported by the National Science Foundation and prepared by experienced researchers and administrators from seven academic institutions, a federal laboratory and a leading corporation. Among them were the three participants in this session. The report is available without charge from Association of American Universities, Suite 730, One Dupont Circle, N.W., Washington, D.C. 20036.*

### An Overview

The purpose of the research instrumentation project was to find ways to improve efficiency in the acquisition and management of scientific equipment used in research at universities. The idea was simply to stretch the funds available from all sources as far as possible.

The events that led up to the project began in the early 1970s, when U.S. universities began to have problems with the costs of modern research equipment. These problems have been documented in a number of studies and are now widely recognized. The situation is generally believed to threaten the quality of our academic science as well as the quality of education of new scientists and engineers. Its dimensions can be seen in just a few numbers from the National Science Foundation's National Survey of Academic Research Instruments, the most recent and most comprehensive look at the hardware itself. The survey covers the years 1982 and 1983. It shows in part that:

- 72% of academic department heads surveyed said that lack of equipment was preventing critical experiments.
- 20% of universities' inventories of scientific equipment was obsolete and no longer used in research.
- 22% of instrument systems in use in research were more than 10 years old.

- Only 52% of instruments in use were reported to be in excellent working condition.
- 49% of department heads surveyed said that instrument-support services—such as machine and electronics shops—were of poor quality or nonexistent.

I think we can agree that these numbers are not what we would like them to be. To some degree, they arise from scientific progress. Rapid gains in the power and productivity of research instruments have entailed higher costs of buying, operating, and maintaining them. The costs of acquisition have well outpaced inflation. The same progress that has brought greater capability and higher costs to instruments has shortened their useful lives. Instruments today may be superseded by better ones in five years or less. Finally, for more than 15 years, funds from all sources for research equipment have not met the needs created by rising costs and shrinking useful lifetimes.

Data on the sources of funds for equipment add important perspective. The most important source has long been the federal government, which accounted for 54% of the academic research equipment in use in 1982-83, according to the NSF survey just cited. The next most important source in the survey was the universities themselves, at 32%. The states directly funded 5% of the cost of the equipment in use in 1982-83, individuals and nonprofit organizations funded 5%, and industry funded 4%.

The federal government's major mechanism for funding research equipment at universities has been research-project grants, which have only slightly outpaced inflation in recent years. Individual grants averaged some $94,000 at the National Science Foundation in 1985 and $133,000 at the National Institutes of Health. Grants of this size can accommodate instruments of only relatively modest cost. But benchtop equipment costing $50,000 or more has become common, and research in a number of fields now requires equipment costing $100,000 or more. At the same time, the fraction of research-project support allotted to permanent academic equipment by NIH fell from 11.7% in 1966 to about 3.1% in 1985. At NSF the fraction fell from 11.2% in 1966 to an average of 7.1% during 1969-76. Similar declines were experienced at the federal mission agencies, although exact data are not available.

Such trends, as the NSF survey data show, created serious difficulties in keeping academic research equipment at the level of the state of the art. Efforts to ease these difficulties began to appear several years ago. NSF's investment in academic equipment rose from 11% of its university R&D budget in 1978 to an estimated 17.5% in 1985. DOD started a special, five-year, university instrumentation program totaling $150 million and projected to run through 1987. DOE started a $30 million program scheduled to end in 1988. The federal and state governments adopted tax incentives to encourage manufacturers of equipment to donate instrumentation to universities. State governments began to spend more on equipment for their public colleges and unversities. States also have initiated a range of programs designed partly to attract industrial support for R&D—and the associated equipment—in their universities.

Partly responsible for the expanded federal investment was the Interagency Working Group on Research Instrumentation. It was formed in 1981, and its members were senior officials from the six major agencies that fund research in universities—NSF, NIH, NASA, USDA, DOD, and DOE. These officials and other federal and academic people recognized early that increasing equipment budgets to the extent feasible would not be enough—ways should also be sought to use funds as efficiently as possible. In July 1982, the Interagency Working Group asked the three associations to consider the need for a special effort to upgrade efficiency in the acquisition and management of academic research equipment. We were asked to address the four broad questions:

- Could changes be made in federal or state laws, regulations, or policies that would enhance the efficiency or acquisition, management, and use of academic research equipment?
- What more can universities do to improve the way they acquire, manage, and use research equipment?
- Can present tax incentives for the donation of research equipment to universities be revised to increase support from industry?
- Are there alternative methods of direct federal funding of research equipment that would yield a better return on the federal investment?

The three associations jointly undertook the study we're reporting on today. We were funded by the six agencies and the Research Corporation and went to work in October 1983. The associations set up a steering committee which in turn recruited a field-research team of three experienced academic scientist-administrators. The report ultimately prepared by this team reflected meetings with more than 500 scientists and administrators at 23 universities and governmental and industrial laboratories. We retained the firm of Coopers & Lybrand to prepare a report on the debt-financing and tax aspects of research equipment. A specialist at the firm of Dow, Lohnes, and Albertson, prepared a report on the role of the states relative to scientific equipment at universities. These reports and information developed by the three associations were combined in our draft report, which went through several stages of critical review by the steering committee on its way to final form.

In general, we examined federal and state regulations and practices, management practices in universities, and sources and mechanisms of funding. We settled on 26 recommendations directed at the federal and state governments, the universities, and the private sector. We also reached one comprehensive conclusion, and I will quote it from the summary of our report:

> Many actions can be taken that clearly would enhance efficiency in the acquisition, management, and use of research equipment by universities. . .The overall problem is so large, however, that it cannot be properly addressed without substantial, sustained investment by all sources—federal and state governments, universities, and the private sector.

I would like to emphasize the words "sustained investment." Laboratories in many sciences nowadays must be reequipped about every five years to remain competitive in research both in this country and abroad. Whatever approaches to the equipment problem may be developed will benefit from recognizing this costly fact.

# 2. GRADUATE EDUCATION FOR TEACHERS (REPORT OF WINGSPREAD CONFERENCE SPONSORED BY CGS AND AACTE)

*Presiding:* Mary Ann Carroll, *Dean,*
*School of Graduate Studies and Director of Research,*
*Indiana State University*
*Speaker:* Dale R. Comstock, *Dean of Graduate Studies and Research,*
*Central Washington University*

**Mary Ann Carroll**

Report on Wingspread Conference on Graduate Teacher Education.

I'm delighted to welcome you to this session in which the panel and I will discuss a conference on Graduate Teacher Education held at Wingspread, November 24–26, 1985. The Wingspread Conference was sponsored by the Council of Graduate Schools in the United States, the American Association of Colleges for Teacher Education and the Johnson Foundation. Conference attendees included the graduate dean and the education dean from 15 institutions, representatives from the Education Commission of the States, the NEA, the AFT and a representative from Senator Paul Simon's office.

As most of you know, CGS and AACTE have had a joint Task Force on Graduate Teacher Education since 1983. Members of the Task Force in addition to myself are: Dale Comstock, Graduate Dean, Central Washington University; Carl Dolce, Education Dean, North Carolina State University; Willie Howard, Education Dean, Howard University; Shirley Menaker, Graduate Dean, University of Oregon; John Palmer, Education Dean, University of Wisconsin, Madison; and Wimberly Royster, Graduate Dean, University of Kentucky.

The formation of the task force was significant for it marked the beginning of a new coalition between graduate deans and education deans. During the past two years the task force has been trying to find an effective way to enhance the quality of graduate education for teachers.

With the Wingspread Conference, the first steps toward that goal were taken. In planning the conference, the task force decided it needed data about current master's degree programs for teachers. Thus when university presidents were asked to financially support the participation of their education dean and graduate dean in the conference, they were asked also to agree that the institution would complete a questionnaire about its master's degree programs for teachers.

The questionnaire completed by each of the 15 institutions was designed by John Palmer of the task force and his staff at the University of Wisconsin. Data were tabulated and analyzed in his office and copies of these data were sent to participants for study prior to the conference.

In selecting participating institutions, attention was given to the mix. It was felt it was important to have public and private institutions, large and small teacher education programs and geographic representation. Jules LaPidus, President of CGS and David Imig, Executive Director of AACTE made the final selection decisions on the basis of their judgment of the strength of the pair of deans—graduate dean and education dean—at each institution. These colleges and universities participating in the conference in addition to those represented by the task force members were: Boston College, Bradley University, Brigham Young University, New York University, Southwest Texas State University, University of Illinois at Urbana-Champaign, University of Missouri-Columbia, and University of Southern California.

The goals of the conference were to gain an understanding of the nature of current master's degree programs for teachers, to identify the major issues or problem areas that must be addressed if such programs are to be improved, and on the basis of that understanding and identification to project some new models for graduate teacher education.

To achieve these goals, the conference structure included five speakers, small group discussions, full conference discussions, reports from the groups to the entire conference and a summary to give us a common focus before our final group discussions. The structure worked well because the individuals with specific assignments all did such an outstanding job.

The conference opened with a panel presentation chaired by Dale Comstock and including Dean Corrigan, Education Dean of Texas A&M, Gary Watts, Assistant Executive Director for Professional and Organizational Development of the NEA, and Kenneth Wadleigh, retired graduate dean from M.I.T. Monday's speakers included Arthur Wise, Director of the Center for the Study of the Teaching Profession and Martin Haberman, Dean, Division of Urban Outreach, University of Wisconsin-Milwaukee. John Palmer led us in a discussion of the questionnaire results. Group discussions were led and reported by a team consisting of a graduate dean and an education dean. Your colleagues who had such assignments were David Ward, Don White, Jim Ballowe and Bill Spitzer.

Shirley Menaker was given the very difficult task of summarizing all the preceding discussions and presentations at the beginning of the last day of the conference. Her presentation was absolutely spectacular. She pulled everything together in a logical and cohesive way more successfully than I would have dreamed anyone could do. Her summary was a major factor in the success of the conference. Let me take a few minutes now to summarize some of the dominant ideas of the conference.

First, in respect to the data collected on current master's degree programs for teachers—not for administrators or counselors and the like but for teachers—and programs which are under the jurisdiction of the School of Education, the following generalizations may be of interest to you. They provide direction for planning new programs.

1. While there are programs for teachers which culminate in a number of

different degrees such as the M.A., M.S., M.A.T., etc., the program chosen most frequently by students is the M.Ed. degree program.

2. External bodies—accreditation and certification bodies—have a heavy impact on the nature of graduate teacher education programs.
3. Students enrolled in such programs are generally white, female and adult, who range in age from 27 to 36 and who have undergraduate GPA's of B or above.
4. Most students are employed full-time and attend graduate school on a part-time basis taking late afternoon and evening classes that meet once a week on campus.
5. Master's degree programs for teachers have no common pedagogy, subject matter and/or foundation course requirements nor are there common admission standards.

It became clear early in the conference that we could not talk about graduate education for teachers without also considering their undergraduate preparation. Thus we found it necessary to think about models for those who are certified prior to graduate admission and different models for those seeking initial certification at the graduate level. It was generally agreed that the fifth year of a 5-year program is really an undergraduate year and not our concern. While specifications for new models were projected at the conference, it was agreed we needed input from teachers themselves and from liberal arts deans before such models should be publicly identified.

Other dominant themes of the conference included the following:

1. To keep good teachers in the classroom, we must have appropriate graduate programs for teachers and career ladders for classroom teachers so ambition and/or financial need don't force effective teachers into graduate programs for conselors or administrators.
2. Teaching must become a true profession. This may require for entry (a) a full general education, (b) a full college major, (c) professional education and practica, (d) a well supervised induction into the profession, (e) a written exam and (f) a performance test. Furthermore, professional status will require that the faculty of schools of education engage continuously in research aimed at improving practice and that, based on research findings, continuing education for teachers is provided.
3. Master's degree programs designed to prepare master teachers should have as their goal the improvement of classroom teaching. This may be accomplished by programs that do three things:
   (a) advance the teacher's skills
   (b) enable the teacher to access, evaluate, interpret and use research and to conduct classroom research
   (c) enrich the teacher's subject matter background.

These three components seemed to the conference to constitute a generic model for master's degree programs for teachers.

4. If quality graduate teacher education programs are to be developed and maintained, new partnerships and new linkages are essential. New partnerships are needed between graduate deans, education deans, liberal arts deans and teachers themselves. New linkages are needed between universities and the nation's schools and between theory and practice.
5. These are issues needing attention if quality master's degree programs for teachers are to be developed:
   (a) We must rethink the practical experience teachers in training receive. Perhaps the main practical experience for teachers should more closely resemble the clinical hospital model and perhaps some practical experience should be a part of each professional education course.
   (b) Plans for the professional development of the teachers of teachers must be designed and implemented.
   (c) Research and theory development must constitute the foundation of teacher education in a university. Schools of Education must engage in research pertinent to teaching. If universities teach only "how to" courses, their teacher education programs will be replaced by the teacher centers and normal schools currently emerging outside of colleges and universities.
   (d) The core or body of knowledge crucial to graduate teacher education must be identified. While participants at the conference generally agreed there is a body of knowledge fundamental to teaching, there was no agreement on what it is.
   (e) Admission requirements to master's degree programs for teachers may need to be revised. Perhaps teaching experience should be a prerequisite of admission.

The conference concluded with a request for proceedings for broad distribution and a charge to the task force to meet soon to identify the next assignment for each participant. There appeared to be high enthusiasm for the project and real eagerness to move ahead. Once in a great while a group of people with the right chemistry are pulled together at the right time on the right topic and something very special and exciting occurs. I believe this happened at Wingspread.

**Dale R. Comstock**

## Graduate Education for Teachers

The CGS/AACTE sponsored Wingspread Conference on Graduate Education for Teachers generated some good thinking about the graduate role in teacher preparation for the future, and succeeded in getting a group of education deans and graduate deans talking and thinking together about problems that affect us all. There was a rumor circulating at the conference that one education dean and one graduate dean from the same university had met each other for the first time at Wingspread.

In my remarks here today, first, I want to provide you with a summary of speaker comments that piqued my interest at the conference. Second, I want to present briefly one model that comes out of what I heard at the conference. And finally, I want to present a few summary remarks of my own.

Our first speaker, Dean Corrigan of Texas, thought that there were some positive new developments on the horizon. He cited the conference we were attending and the question raised at a CGS annual meeting a few years ago—Is Graduate Education Fulfilling Its Responsibilities To Primary And Secondary Schools? He suggested four responses needed. 1) Graduate schools need to assure excellence in the preparation of teachers and education specialists; 2) to insist on higher quality in continuing professional education and inservice education; to support the conduct of research that informs practice; and to stand up and lead for quality programs at primary and secondary schools.

If these are the responses needed, then in my opinion clearly we are not fulfilling our responsibility. We, education and graduate deans, are too timid in demanding excellence in our graduate programs, in continuing and inservice education, and in activities to strengthen our schools. We often complain of our lack of ability to influence these areas, but I would maintain that we have much more influence and power than we want to admit.

Dean Corrigan also expressed the view that the content of teacher preparation programs be set following the determination of the kind of schools we want beyond 1985. He felt that reform of graduate education of teachers must occur with the reform of the schools and their conditions. I think we must move quickly, much more quickly than Dean Corrigan suggests. If we wait for reform in the schools, reform will become a passing fad like the twist, the hula hoop, and the Edsel.

Dean Corrigan maintained that education is politics, and that educators must get more into politics. Already, the largest groups of legislators in the country, after the lawyers, are the teachers (some 35%). The problem with the politics here is that higher education is going to be shorted in budget allocations if this group takes control since the pie is not getting larger. Further, political setting of rules and regulations at the legislative level is very costly now to schools and certainly does not encourage an improvement in the conditions for teachers. Legislative decisions that call for reporting and accountability procedures chew up funds that could be used for genuine improvement.

Gary Watts of the NEA, introduced three concepts that might shape the future of teacher education:

1. Graduate education of teachers is inter-related with undergraduate education. There should be a full academic major before entry, solid foundation in professional studies, and an intensive clinical experience much longer than ordinary student teaching. This all implies five years or more of study. These changes are contrary to the alternative certificate route currently being promoted to replace one million teachers in the next 10 years.

2. Our objective should be, must be, a competent and skilled educator in every classroom.
3. The profession has to be restructured. Growth in the profession has to be measured by developmental standards, not just minimum standards. There must be a continual upgrading and advancing of skills, not just the acquisition of minimum skills as we have practiced in the past.

I detected from his remarks a great need for additional resources. I think we are, at best, in a zero-sum game or perhaps a negative-sum game for financial resources for the next 8 to 10 years.

Our third speaker, Ken Wadleigh, former graduate dean at MIT, gave us an outsider's view. He noted the mixture and interdependence of graduate and undergraduate education. He stated some simple qualities of good teachers—knowledge of their subject, enthusiasm for it, some charisma, and, of course, a liking for children.

He saw some analogies in the ups and downs of teaching and engineering.

1. Teaching is an art as is engineering.
2. Perception of status—pre-World War II, it was high for teachers and then declined; after World War II, it was low for engineering and it returned.
3. Communication skills are very important in both professions.
4. Politics of society is widely present in both professions.
5. Supply and demand play a large role.
6. Attraction of the best to graduate school—quality students do not go on in either field.

He then provided some suggestions for our consideration.

1. We need to lower the boundaries between departments in arts and sciences and in education.
2. Do not try to do everything while reforming, and as a result do nothing.
3. Recognize that teacher education is a good base for entering other areas.
4. Colleges of education have to be happy places if they are to succeed.
5. More personal judgments need to be made on who enters.
6. More disciplinary involvement is needed in preparing teachers.
7. More university-school cooperative efforts—a two-way street.

Arthur Wise who heads a teacher education study project at the Rand Corporation then spoke on the quality factor in graduate programs for teachers.

1. He pointed out that a severe shortage of teachers is on the horizon. Talented young people are not willing to commit to the teaching profession. Also talented women and minorities have other opportunities that were not present in the previous decades. In 1972, 11% of high school seniors wanted to be teachers; by 1980 this had dropped to 4%.

   Nearly half of all current teachers are inclined to leave if an opportunity arises. (This figure may be even higher in higher education according to recent data.)

   Our lack of confidence in the teaching profession has led to rules and regulations which make the profession even less attractive.

2. In 1935, only 10% of elementary teachers and 85% of secondary teachers had the bachelor's degrees. In 1955, it was 70% for elementary teachers and 97% for secondary teachers. Someone pointed out that there are hundreds of teachers in Texas without bachelor's degrees now, in 1985. He suggested that there is no research suggesting that the bachelor's degree is necessary before entering a professional teacher education program.
3. More legislation to standardize makes the profession even more unattractive. Reducing regulation and oversight will result in improvement of conditions for teaching. (I agree with this. We have little concept of the great cost of excessive rules and regulations and the reduced productivity created by them.)
4. Making teacher preparation graduate in level makes it more selective, the public has more confidence, and thereby agrees to raising quality and salaries.
5. Resources—Where will they come from? In 1972, 49% went to teacher salaries, and in 1982, only 38%. In 1972, we spent 5.5% of personal income on education and in 1982, only 4.6%. There must be a major redeployment of how resources are spent.
6. Who are the constituents for reform of teacher education? Everyone in the abstract. Education and graduate deans alone are not enough. Parents cannot be counted on since they are opting for private schools on a widespread basis. Teachers themselves are the major constituent. His view was that they must take control of the profession just as lawyers and doctors have done.

At least Wise began to answer the resource question. De-regulation would provide lots of dollars if we would try it, but what of the unemployment of bureaucrats?

As Dean Carroll mentioned, the conference broke into four working groups. Two points stuck out for me from the first round of discussion groups.

1. There needs to be more integration of subject areas with the professional areas.
2. There also needs to be a major restructuring of the undergraduate degree, not just for teachers, but for all baccalaureate programs.

After the first round of small discussion groups, Martin Haberman, Dean of Urban Outreach at the University of Wisconsin-Milwaukee, provided some colorful and sometimes provocative thoughts.

1. He noted that 80% of any job is showing up, and 80% of any university dean's job is showing up and keeping quiet.
2. Further, university programs are the accumulated votes of the prejudices of those who show up.
3. In the schools of education with doctoral programs, there is a tendency to model programs like the other social sciences in order to be more credible in academe. In other schools of education, they tilt to the left and make programs more relevant.
4. In schools of education, theory and practice are pejorative terms. Practice is everything done in the schools. Theory is everything done in the universities.

5. Too many specialties for teachers reflect what the faculty learned in graduate school rather than what is needed. There is no excuse for meeting only faculty needs in courses in teacher education.
6. As institutions get better, the most conservative position always wins out.
7. Every course for teachers should have a field-based practicum. Every course should have a syllabus planned by faculty with a master classroom teacher.
8. By 1990, there will be several full-blown normal schools in large city schools. Shortly thereafter, they will be offering master's degrees.

He then provided five criteria that teacher education programs should meet.

1. *Selection*. Students should be selected into teacher education programs only after experience with children and youth as students. After this experience, faculty and master classroom teachers working together should assess that experience and the applicant's other background. Some with high GPA would be excluded.
2. *Field Basis for the Program*. Every course directly in the teacher education program should have a practicum associated with it.
3. *Faculty*. Every course should be planned by faculty and master classroom teachers working together.
4. *Knowledge Base and Content of Courses*. For every course there should be a syllabus planned by the faculty and teachers. It should be a public document available for annual review and revision.
5. *Partnership*. Every teacher education program should operate in partnership with a set of schools.

Other comments from reports included the following:

1. In most of our large urban cities, a majority of the students are minorities. In New York City, 78% of the K-12 students are from minority groups, that is, these groups are in the majority in the schools and will present special problems in the years ahead.
2. Ten percent of graduate school resources go to education, though 40% of the students are in education.
3. We worry a great deal more about the preparation of veterinarians than we do teachers.
4. We need to re-discover "principals who are teachers" instead of widespread use of "principals as managers."
5. If teacher education becomes totally in-service oriented, which is the tendency in some areas, then universities will stop preparing teachers.
6. The master's is emerging as a standard expectation for teachers in some regions. This was stated several times. In the state of Washington, nearly three-fourths of the teachers with continuing certificates hold the master's.
7. The master's for teachers should be clearly graduate in nature and separate from certification or licensure.
8. More programs should be designed to keep classroom teachers teaching in their field, and not moving into administration or counseling.

So much for what I heard others say at the conference. One model for secondary teachers that seemed to evolve from the discussion has the following features.

I. Initial certification continues to be at the bachelor's level, but there is significant input and integration of both the discipline of the student's major and the pedagogical area. Further, the student would complete a full major and general education requirements just as all other arts and sciences students do.

II. Master's level study would occur after 2–3 years of teaching experience in the field for which the student was initially endorsed. The focus of the degree would be in the discipline, but partially re-oriented toward teaching discipline. It would build on the knowledge base of the discipline which teaching methodology and practice integrated into the program.

I would like to see such a degree carry the M.A. or M.S. designation in the discipline as an alternate track, but this may be too much to expect especially in institutions where the doctorate is also offered in the discipline. Further, as baccalaureate preparation for such a master's program, there also needs to be better integration of general education and the major specialty. Too many general education programs are a shopping list of courses with no coherence to them.

Some universities already offer programs along these lines, but not many students have been pursuing them in recent years. Most teachers come back for their master's in education administration, counseling, special education and the like. We need to change this thrust.

When I was a high school mathematics and physics teacher some 30 years ago, and before I went off to graduate school to earn a Ph.D. in mathematics, I was an admirer of George Polya, the well-known Hungarian mathematician. In the latter part of his life, he did a lot of work with high school teachers in his position as a professor of mathematics at Stanford University.

I'd like to share some thoughts with you about three areas of teacher preparation that Polya addressed in his writings about high school teachers.

The first involves the subject matter area. It is a sad fact, but widely recognized, that many high school teachers' knowledge of their subject is, on average, insufficient. This is the main reason why I stayed in high school teaching only a few years.

Our knowledge about any subject consists of information and know-how. Know-how is ability to use information; it requires some independent thinking and creativity. In math, it's the ability to do problems, find proofs, to criticize arguments, to use mathematical language with some fluency. Most people agree that, in mathematics, know-how is more important than mere possession of information. Everyone wants the high school to impart to students not only information in mathematics, but also know-how—independent thinking and problem solving skills. Yet almost no one asks for these beautiful things for the high school teacher; is that not remarkable? If, however, the teacher has had no experience in creative work of some sort, how will he or she be able to inspire, to lead, to help, or even to recognize creative activity in students? A teacher who acquired knowledge in mathematics purely receptively can hardly promote active learning in students. A teacher who never has a bright idea will probably reprimand a student who has one instead of providing encouragement. There is no substitute for active mathematical work. Our math teachers must have a mastery of the subject they are to teach.

The second area is methods courses. Some methods courses are often received with something less than enthusiasm. Yet so also are some courses offered by the mathematics departments. Polya put it this way, "The mathematics department offers us tough steak which we cannot always chew, and the school of education offers us vapid soup with no meat in it." Are methods courses really necessary? Is teaching teachable? Should we spend less time on methods courses, and more in the subject area and in practice, at least for high school teachers. There is more chance to reach an answer to these questions in open discussion than in the widespread grumbling about teacher education that I hear now.

Finally, good teachers have good attitudes about their teaching. They know their subject, have interest and enthusiasm for it. If a teacher is bored by the subject, the whole class will inevitably be bored by it. Good teachers keep in mind and take into account what they know and what they do not know, what they would like to know and what they do not care to know, what they ought to know and what is less important for them to know. There is sort of a necessary and sufficient condition here: if you have interest in, and knowledge of, the subject matter and if, moreover, you can see the student's case and what helps or hampers his or her learning, you are already a good teacher or will become one soon; you may need only some practice and experience.

We need to exercise more judicious selection of teachers along these lines. I am not sure that our present process yields these judgments.

## 3. OFF-CAMPUS GRADUATE EDUCATION

*Presiding:* Vivian A. Vidoli, *Dean,*
*Division of Graduate Studies and Research,*
*California State University, Fresno*
*Speaker:* Lionel Baldwin, *President, National Technological University*

**Lionel Baldwin**

### A National Program of Graduate Instruction for Engineers

The National Technological University (NTU) is a new, private non-profit institution founded to serve the advanced educational needs of today's busy, highly mobile engineers, scientists and technical managers. NTU is governed by a Board of Trustees dominated by industrial executives. On a nationwide basis, NTU offers a wide range of instructional television (ITV) courses taught by the top faculty of twenty of the nation's leading engineering universities (listed below). NTU's functions are to:

- award accredited master's degrees in selected disciplines;
- provide research seminars in each discipline;
- operate an instructional television network (ITV) via satellite for convenient, flexible, on-site service nationwide;
- offer non-credit short courses and workshops to introduce new advanced technology concepts to a broad range of technical professionals; and
- establish a sophisticated satellite network infrastructure between industry and the university community.

Sharing the satellite network with NTU is the Association for Media-Based Continuing Education for Engineers (AMCEE). AMCEE was founded in 1976 to increase the national effectiveness of continuing education of engineers and other technical professionals. AMCEE currently has 33 member-universities providing them with short courses and other non-credit offerings. AMCEE broadcasts these courses on the network from 11:00 a.m. to 5:00 p.m. eastern time every day on one of our two channels. All of NTU's member-universities must also be an AMCEE member (listed below).

NTU and AMCEE began regular satellite delivery of advanced technical education in August, 1985. During the first year of satellite networking, NTU is offering more than 4,000 hours of academic credit instruction; AMCEE is offering over 1,500 hours of non-credit, state-of-the-art programming.

The network operates on G-STAR 1 with a modern Ku-band transponder to provide two channels of full motion, color video throughout the day and evening. The signal is received by subscribers through small (4.0 meters and less), inexpensive downlinks located near the professionals viewing the broadcasts. Direct phone lines to the campus classroom provide for teleconferencing operations. Videocassette recorders provide time buffers when needed. Interaction is encouraged also using electronic mail, computer conferencing and telephone office hours.[1]

The ITV programs are effective and popular with the mature, goal-oriented engineers who participate. Many independent studies attest to their effectiveness.[2] Convenience is a prominent motivating factor: Participants cite "time saved in travel to class"; "only way available"; "can make up classes missed while on business travel"; "fits my work schedule." Over 3500 engineers in the last twenty years have completed M.S. degree programs from a dozen leading universities solely by ITV instruction in regional programs. As you might expect, each of these universities has performed quality assessments, and the factors which affect quality to assure that off-campus student performance is on a par with that of campus graduate students. Some of these studies which all found comparable or improved performance, were reviewed in reference 2.

A coordinated, national delivery system for advanced education of engineers and scientists is clearly in the nation's best economic and defense interests. Top faculty are in very short supply. Modern telecommunications provide a delivery system to launch the cooperative effort by NTU universities. Each participating university will ultimately have an earth station or uplink; initially seven universities are operating uplinks.

NTU's academic programs are as follows:

*Master of Science in: Computer Engineering
Engineering Management
Computer Science
Electrical Engineering
Manufacturing Systems Engineering

*Undergraduate bridging courses for non-majors wishing to enter the M.S. programs in electrical, computer engineering, and computer science.

Over 600 technical professionals were enrolled in 37 courses from NTU in the fall of 1985. This compares with the 420 who were enrolled during the 1984-85 academic year. Corporations currently participating in the NTU programs include: ALCOA, AT&T, BDM, CTS, DEC, Eastman Kodak, General Electric, General Instrument, GTE, Hewlett-Packard, Honeywell, IBM, NCR, and Sandia National Laboratories.

**AMCEE Member Schools (*NTU Participants)**

Arizona State University
Auburn University
Boston University
*Colorado State University
*Georgia Institute of Technology
GMI Engineering & Management Institute
*Illinois Institute of Technology

*Iowa State University
Massachusetts Institute of Technology
*Michigan Technological University
*North Carolina State University
*Northeastern University
*Oklahoma State University
Polytechnic Institute of New York
*Purdue University
*Southern Methodist University
Stanford University
*University of Alaska
*University of Arizona
*University of Florida
*University of Idaho
University of Illinois at Urbana-Champaign
*University of Kentucky
*University of Maryland
*University of Massachusetts
University of Michigan
*University of Minnesota
*University of Missouri/Rolla
University of Notre Dame
*University of South Carolina
University of Southern California
University of Washington
University of Wisconsin-Madison

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1. Baldwin, L. V. and Down, K. S., "Educational Technology in Engineering," National Academy Press, Washington D.C., 123 pp. (1981).
2. Baldwin, L. V., "An Electronic University," *IEEE Spectrum*, New York, NY, Vol. 21, No. 11, pp. 108–9 (November 1984).

ANAHEIM
Marriott Hotel

John M. Ellis, Dean of the Graduate Division, University of California, Santa Cruz, and Victoria A. Fromkin, Vice Chancellor, Graduate Programs and Dean of Graduate Division, University of California, Los Angeles, addressed **Current Issues in Scholarship and Graduate Education in Languages and Literature** at the opening plenary session of the meeting. This session in honor of Dr. Gustave O. Arlt, whose field of academic specialization was languages and literature, was presided over by Theodore Ziolkowski (center), Dean of the Graduate School, Princeton University.

ANAHEIM
Marriott Hotel

The 25th anniversary meeting was a time for looking back, particularly during a session on **Graduate Education: Then and Now**. Chaired by CGS Board member Albert Spruill (center), North Carolina A&T State University, the *Then* segment was addressed by two whose connections with CGS date back to its establishment: Bruce Crawford (seated), member of the organizational committee which established the Council, and John C. Weaver, elected the first Vice Chairman of the Council. At that time Dr. Crawford was graduate dean at the University of Minnesota, and Dr. Weaver, graduate dean at the University of Nebraska.

Well qualified to address **"Redefining the President or Chancellor's Role in Graduate Education"** is Charles Young, Chancellor, University of California, Los Angeles, who shared his experience and knowledge with meeting attendees. Lee Jones (seated) CGS Board Chairman, presided at this session.

Robert M. Rosenzweig, President of the Association of American Universities, in a luncheon address entitled **"The Politics of Having Less,"** stressed the importance of the higher education community's being concerned with its collective good rather than with only short-term advances of its individual segments.

Being introduced by **David S. Sparks**, CGS Board Chairman-Elect, is **James H. Zumberge**, President, University of Southern California, who at a plenary session on the final day of the meeting discussed **Specialists and Generalists: A Reflection on the Relationship of Graduate and Undergraduate Education in the Coming Years**.

Graduate Schools
in the United States

Two speakers addressed themselves to the topic of **International Aspects of Graduate Education**: Victor Hao Li (at the podium), President of the East-West Center, and Norman Peterson of The Liaison Group for International Educational Exchange. Presiding at the session was Volker Weiss, Vice President for Research and Graduate Affairs, Syracuse University.

in the United States

In keeping with the general theme of the meeting, speakers on **Minorities in Graduate Education** also looked at the past-present-future. At the podium is Howard Taylor, Director, Minority Graduate Education Research Program, Educational Testing Service, and (seated) Sarah Melendez, Associate Director, Office of Minority Concerns, American Council on Education, with Wimberly C. Royster, Vice Chancellor for Research and Dean, Graduate School, University of Kentucky, who presided.

## 4. DATA NEEDS IN GRADUATE EDUCATION

*Presiding:* Frances D. Horowitz, *Vice Chancellor for Research*
*and Dean of Graduate School,*
*University of Kansas*
*Speakers:* Arthur M. Hauptman, *Director,*
*Project on Graduate and Professional Education,*
*Association of American Universities*
*Charles W. Daves, *GRE Executive Program Director,*
*Educational Testing Service*

### Arthur M. Hauptman

In 1984, the Ford Foundation provided a grant to the Association of American Universities to develop a research agenda for improving the data on graduate and professional school students and how they finance their education. The project report, which will be available this spring, presents a picture of what data are currently available and provides recommendations for how that information might be improved. Today I want to discuss our recommendations for a research agenda.

I should mention that the purpose of the project was to step back and get a picture of both graduate and professional education, their similarities and differences. As a result, we deliberately tried not to do a careful dissection of various data collection efforts in particular fields or for particular types of students.

In assessing the current status of data in graduate and professional education, I am tempted to paraphrase the plight of the ancient mariner, "Data, data everywhere, but relatively little is available to make intelligent policy decisions."

In terms of "data, data everywhere. . . ," the Department of Education collects data on degrees awarded. The National Research Council does a great job of collecting information on doctorate recipients, a really exemplary effort. The National Science Foundation keeps an eye on graduate enrollments and support in the sciences and engineering. So if all these data are available, what's the problem?

In our report, we note a number of general concerns about our current ability to use existing data sources to discuss policy issues.

1. The data tend to be several years old, with certain exceptions such as the Survey of Earned Doctorates;
2. Most of the existing data are collected sporadically;
3. Information on students' financing pattern for advanced degrees is especially weak and of less quality and quantity than what we know about the characteristics of graduate and professional school students; and
4. Finally, there is a virtual void of information on master's degree students

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*Abstract given here. Copy of complete presentation available on request from CGS office.

despite the fact that this group is by far the largest component of advanced degree enrollments.

The report identifies four specific types of information that need to be improved.

One is graduate school enrollments by field of study. It's hard to gauge the impact of changes in funding if we don't have information on recent trends in enrollments by field of study.

In addition to the aggregate statistics on enrollments and financing patterns, it is also critical that we be able to examine the decisions and situations of individual students. The absence of an adequate "micro" data base on students enrolled for advanced degrees means that we cannot answer questions about student retention and what the best college students are doing once they graduate.

Another high priority data need is finding out how students are financing their education. Information on the financing patterns of graduate and professional school students is, in some instances, truly discouraging. We don't know accurately the answers to some very obvious questions, such as who borrows in the GSL program, or exactly how many fellowships or assistantships are available?

An issue related to the financing patterns question is whether debt burdens are becoming excessive to the point where they are affecting students' decisions about whether they continue their education, and what types of degrees they choose to pursue, as well as personal choices such as when to marry and bear children.

In several of these areas, efforts are already underway which may resolve some or all of our current concerns. In the case of graduate enrollments by field of study, we recommended that rather than coercing the federal government to get back into the business of collecting graduate enrollments, it would be preferable to strengthen the CGS/GREB survey to become the relied upon national data base on graduate enrollments. Steps are being taken to do just this.

To improve the data on financing patterns, the federal government has committed considerable funds to a survey of both undergraduates and postbaccalaureate students. This survey is currently being field tested and the major effort will occur in the next academic year.

To achieve a better sense of debt burdens, the Lilley Foundation funded a study of individuals who are repaying their student loans in order to determine the situation of individual repayers. The federal government, as part of its larger financing study, is also planning to survey loan repayers.

In these areas we have to wait and see whether the efforts underway will yield fruit. But in one critical area—developing a micro base on individual students—action must still be taken.

This action could take one of two directions. One direction would be to establish a consortium of representative graduate schools and have participating schools collect detailed data on their students. This approach, to my way of thinking, has several inherent problems. First, it would take a long time to establish a data base. Second, collecting information on students enrolled in graduate schools means excluding individuals who are not enrolled, i.e., those who chose professional school programs or those college graduates who did not continue their education.

The alternative is to mine the data contained in the records of the students who take the admissions tests for graduate and professional schools and those students who apply for financial aid. If these data sources could be combined, then we would immediately have in our possession an impressive micro data base. This data base could then be augmented with information collected from individual campuses to track students once they enter their advanced degree programs. While I realize that this approach would face a number of substantial political and organizational obstacles, the potential result of having a superlative micro data base would be well worth the effort, in my opinion.

Now, that I have discussed the problems with the current array of data, does the lack of reliable information in these respects mean that we sit on our hands while we wait for the data to be developed? The answer, of course, is no.

There is much we can do—and must do—with what we know now. We do know, for example, that a brain drain of some proportion is occurring as more of the best students are opting for professional schools or commercial opportunities. The good work of Rod Hartnett of Rutgers and the Bowen and Schuster report on the state of the professoriate provide valuable insights on this subject.

We can also infer from the data and from our common sense that fellowships alone will not be enough to redress this brain drain. Offering a student $5,000 or even $10,000 a year in fellowships is not enough—given current labor market conditions—to convince many students to forego other opportunities to go to graduate school.

Nor are loans the answer. Doctoral students tend not to borrow nearly as much or as frequently as students enrolled in master's or professional programs. Thus, offering more loans is not likely to be the solution.

When I examine the data, I come away thinking that we need to intervene on the labor market side by offering larger salaries for new faculty in those fields where industry is luring the best students, or by creating additional faculty slots in those fields where oversupply of Ph.D.s appears to be the decisive factor.

Canada, for example, when faced with a literal brain drain where many of its best students were moving permanently to the United States, instituted a federal program that created and financed a relatively large number of slots for new faculty members in the sciences and engineering. I should add that, at the same time, the Canadian government dramatically increased the number of fellowships it provided as well as funding the employment of a large number of Ph.D.s in Canadian industry.

My stint as director of this project represents my first foray into the realm of graduate and professional education, and I have found it to be a challenging experience. I hope that my remarks today, and the report when it is issued, will contribute to the continuing dialogue of what we can do to understand better the very complex world of graduate and professional education.

**Charles W. Daves**

There is a continuous need in graduate education for a variety of data with which to plan and make important decisions. The Graduate Record Examinations Program (GRE), in some cases jointly with the Council of Graduate Schools (CGS), plays a major role in working with graduate institutions in meeting their data needs.

Four major categories of graduate data needs currently occupy the attention of the GRE Program: enrollment data, student descriptive data, graduate program data, and financial data. A summary of the status of GRE Program work on each of these areas follows.

### Enrollment Data

For the past fourteen years, the GRE Board and the Council of Graduate Schools have conducted an annual survey of enrollments in member schools of CGS. The survey has been sent in two parts, and the results of each part have been reported separately. The survey is currently undergoing revision, and, beginning with 1986-87 academic year, revisions in data collection, storage, processing and reporting will go into effect. The survey population will also be expanded to include CGS affiliate members.

### Student Descriptive Data

For more than a decade now, the GRE Program has been collecting data on students through a Background Information Questionnaire that students complete as part of the registration process to take the GRE.

From the background information collected the GRE Program publishes annually a *Summary of Data Collected from Graduate Record Examinations Test Takers*. This publication is available free of charge upon request. Activities were recently undertaken (within the GRE Program and within the graduate community) to identify related data needs beyond those currently met via the Background Information Questionnaire. The result is that the Background Information Questionnaire, which currently asks 26 questions, will be revised and probably expanded. This should lead to an increase in information deemed important to describing and conducting research on the graduate student population.

### Graduate Program Data

Every two years, CGS and GRE collect from graduate institutions a wide array of graduate program information, which is published in the *Directory of Graduate Programs* (DGP). This compilation of information on graduate programs is made available to prospective graduate students. The database includes information on types and locations of graduate programs, admissions requirements, enrollment trends, application deadlines, and degrees granted.

The GRE Program is currently looking at new ways of collecting, summarizing and disseminating these data for use by graduate institutions, prospective graduate students and researchers.

## Financial Aid Data

The Research Committee of the GRE Board believes that availability of financial aid may affect a student's decision to attend graduate school, choice of a field of study and, perhaps, performance in graduate school. As a consequence, the GRE Program has held preliminary planning meetings and is working with the GRE Board's Research Committee to define and conceptualize research projects on:

1. Trends in financing graduate education such as costs, sources of funds, rate or percent of students in debt, and changes in student indebtedness.
2. Relationship of indebtedness to measure of performance, decision to go to graduate school, decision to go to graduate vs. professional school, completion/attrition, and time to degree.

All of these efforts are ongoing. The graduate education community will be kept apprised as they unfold.

# Luncheon

## THE POLITICS OF HAVING LESS

*Presiding:* Jules B. LaPidus, *President, Council of Graduate Schools*
*Speaker:* Robert M. Rosenzweig, *President, Association of American Universities*

**Robert M. Rosenzweig**

Some years after leaving government service, Dean Acheson wrote his memoirs, and he called them "Present at the Creation"—a modest title, quite in keeping with Mr. Acheson's view of the universe and his place in it. Not long after the book appeared, an irreverent and very funny friend of mine, Nelson Polsby of the Berkeley Political Science Department, wrote a spoof of the Acheson book and called it "Peasant at the Creation." This came to mind as I was reflecting on my own connection with the founding of the Council of Graduate Schools. I recall very well the early conversations about the need for a new organization, because many of them took place in connection with gatherings of the NDEA Title IV Advisory Committee. As a junior member of the staff of that program, I was allowed to be present at many of those conversations, much in the way that in past times butlers, footmen and maids were present, though functionally invisible, while the real people carried on their affairs.

It was, of course, today's occasion that led me to think of the old Title IV program because were it not for Title IV NDEA, there would have been no CGS, and I suppose it follows that we would not be here today. The connection is not really a surprising one. Students of interest group politics have long noted that pressure groups grow either in anticipation of or in response to government action that threatens harm or promises benefits. The first American pressure group was the Knights of Cincinnati, formed to lobby for a bonus for Revolutionary War officers. The second, half a century later, was formed by a group of brewers to resist a threatened tax on beer. And so it has gone and so it still goes.

But in addition to being a particular example of a general political phenomenon, Title IV was important for reasons of substance. For the first time in that program, government addressed graduate education as an object in its own right, rather than as an adjunct to some other national purpose. The purpose to be served by Title IV was the training of college teachers, just what most graduate schools always thought they were about. Moreover, for the first time, a program was aimed at building the central unit of graduate education, the academic department, and not specifically at the individual student or the principal investigator.

The way the program was administered also had a great deal to do with the conception of CGS. I think the main credit here should be given to the late Homer Babbidge, who took over the leadership of all of NDEA's higher education programs. Homer understood that Title IV was something different and that those differences argued against turning the program over to an Office of Education civil servant. Instead, Homer sought out the knowledge and experience that only graduate deans, themselves, could supply. Not incidentally, he was also smart enough to see that turning to the universities for help would build links for the Office of Education that could enhance its stature and influence.

And so began the introduction of graduate deans to the ways of Washington. I, myself, worked with Peter Elder, Henry Bent, and Bob Bruce as Title IV heads, and with probably two dozen other deans as members of the Advisory Committee. My recollection is that most of those estimable individuals found the experience both exhilarating and sobering. Those were heady days for all of higher education; the air was full of promise for new initiatives to help fuel the enormous expansion of the entire system that was taking place all over the land. What the deans saw as they watched the other NDEA programs develop was that the foreign language teachers and scholars, the guidance counsellors, the student aid community, and most of the others who had been touched by the new government programs either were organized or were on their way to becoming so, for the purpose of maximizing appropriations, influencing the administration of their programs, and shaping additional policy initiatives. Graduate deans were not. The major organization of deans, AGS, was not pointed toward Washington as an arena of activity, and neither it nor its cognate body, AAU, was staffed to become active, or much inclined to do so.

I think it is fair to say that CGS grew out of and away from AGS. In the process it developed a broader membership and took on responsibilities that must have surprised its founders as parents are often surprised by the things their children get up to.

Shortly after the birth of CGS—and I suggest no causal connection—I left Washington to return to a campus for what I thought might be a relatively short stint, but which turned out to last more than twenty years. When I finally did return, nearly three years ago, the terrain was not unrecognizable, but much had certainly changed. CGS was, of course, well established, and the AAU presidents had pointed their organization in the direction of federal policy in no uncertain terms. Moreover, by then, virtually every administrative unit and academic discipline on the campus was represented in Washington by a national organization with a paid staff and a mandate to guard jealously whatever it was their members needed from the feds. This development, as I shall explain later, has profound and not terribly healthy consequences for the future.

But the most important change from my earlier term in Washington was the change in the broad outlook for education and for the role of the government in that sector. The expansive optimism of a generation ago is long gone, leaving behind a high degree of institutional dependency on the government for the support of important academic functions and the imminent prospect of greatly increased competition for a smaller amount of money. That, in fact, is the subject I want to talk to you about today. I believe that we may be entering a profoundly disruptive period and that we had better begin to talk about what may be ahead, even at the risk of producing after-lunch indigestion.

Any serious effort to reduce the continuing high federal budget deficits will have profound effects on the social fabric of science and higher education in America. The Gramm/Rudman/Hollings Amendment, which has now been enacted, is a clear indication that such an effort is underway. Furthermore, there is already evidence of competition and serious division among groups whose alliance helped to make the growth of federal patronage possible. Those who are responsible for the conduct of science and of universities need to spend some time together to try to understand what is happening and what the consequences are likely to be, and then to devise strategies that may help to limit the extent of the inevitable damage.

I fear that in the absence of such an effort, the recent past is a good guide to what may be expected in the near future. Twice in recent months, individuals representing the scientific profession have been publicly at odds with those who represent the institutions in which most scientists work. The most dramatic and contentious case is the active lobbying effort by some scientific societies in support of a freeze on NIH indirect cost rates in order to assure a specified number of new research grants from the FY 1986 budget. In the second instance, that same perceived competition between the direct cost of research—that part of project funding that supports scientists directly—and the total cost of research, which includes the cost of the structures that undergird research, has already begun to surface in debates over ways to remedy the serious shortage of capital for research facilities and instrumentation.

That artificial and unfortunate, but at least easily understood, division between allies and colleagues will become even more complicated and divisive as deficit reduction takes its place at the top of the budgetary agenda. At this moment, the only foreseeable surplus is in the points of tension at which the stresses will concentrate. Within science itself, in addition to the conflicts that have already come into view, there will be powerful advocates for traditional project research, others who will see the future as lying in the creation of new cross-disciplinary centers, and still others who will be promoting such large enterprises as the Superconducting, Supercolliding Accelerator. Not all wishes will be fulfilled.

Nor do the difficulties end there. For the first time, the support of academic science is likely to be directly competitive with government support for other academic purposes. The large student aid programs, programs in support of libraries, graduate fellowships, and international and foreign area studies will all have their vocal and committed advocates. Unless reductions are made by an automatic formula, the prospect of conflict in the Congress among important university purposes is an unpleasant one to contemplate. Indeed, even if that particular conflict is avoided by some system of automatic reductions in all programs, the same battles will need to be fought on every campus, unless new funds are available from somewhere else to compensate for the loss of federal appropriations. That solution is unlikely under the best of circumstances; it is downright improbable if tax reform diminishes the incentive for philanthropic giving.

Politicians have long understood that it is easier to manage growth than contraction. It is not that better decisions are made when resources are plentiful and growing; rather, what is so attractive about that condition, and what makes budgets of all kinds so hard to cut, is that decisions—good or bad—produce only varying degrees of pleasure rather than pain and suffering. Everybody is happy, some more so than others. On the other hand, scarcity—or more accurately, contraction—is nothing but trouble. Every action is painful to almost everybody, and few are consoled by the knowledge that others are suffering more than they.

The postwar history of science funding and of university financing convincingly demonstrates the truth of the former and provides some insights into the latter, as well. It is no coincidence that the decades of the '50s and '60s are now viewed with considerable nostalgia. Until the last few years of the '60s, the academic and scholarly enterprise experienced enormous expansion, widespread public support and approbation, and generous funding for a wide range of programs and projects. During that period, much of the capital structure still in use was put in place with the help of federal programs, and most of the faculty now active in universities were trained, many with fellowships, traineeships, and assistantships provided by the government. In many important respects, American science and American universities are now drawing on the human and physical capital put in place by the investments of that extraordinary period.

The period that followed, roughly the 1970s, should probably be seen as a time of transition. Changes, even important ones, take time to work their way through complex systems, and some of the effects produced by the end of the period of rapid growth were not immediately recognizable. The end of federal help for the construction and renovation of research facilities, for example, resulted in opportunities foregone and in slow deterioration of existing structures, but those are conditions easily overlooked in the competition for scarce funds. In fact, the dominant metaphor of the period in campus planning was the "steady-state," and the central question was, "How does a dynamic institution pay for the innovation required for it to stay alive and vital when it cannot depend on incremental resources with which to do it?"

Responses to that question varied according to the circumstances of each institution. Some were able to mitigate their problems by more energetic private fund raising. Most institutions slowed the rate of growth in their faculties and the rate of increase in faculty salaries, and virtually all deferred maintenance on their physical plant and slowed plans for new construction. Careful financial planning and budgeting often led to economies in operating expenses, and many institutions for the first time engaged in large-scale borrowing to build needed buildings, make campuses more energy efficient, and repair aging capital structures.

It might be argued that this period had some constructive aspects, even that it was in some sense a necessary correction for some of the excesses that had been allowed to develop during the preceding period of rapid growth. Perhaps so, but one can also see in this period the seeds of conflicts that have grown more embittered as time has passed. The need for better financial analysis and budgeting inevitably led universities to understand better the true costs of research overhead and to seek reimbursement for them, thus pitting one set of institutional needs advocated by administrations against another, advocated by faculty. And the neglect of facilities needs produced the backlog, which first has prompted some institutions to seek direct appropriations from Congress for their projects, with the threat that practice poses to the policy of distributing research funds on the basis of scientific quality, and next has produced funding requirements for buildings that seem in conflict with those for research projects. Indeed, the resort to borrowing and the depreciation of buildings not financed directly by the government has driven indirect costs even higher, thereby exacerbating the conflict.

It seems quite likely that a third period of funding for research and for universities is about to begin. If the powerful political impulse to deal with high federal deficits is sustained in actual decisions on budget and appropriations, it will be a period of retrenchment and retraction. It will test the ability of individual university administrations and their faculties to share consequences fairly and with a concern for the future as well as for the present. It will also test the ability of universities and associations of faculty, to work collaboratively in pursuit of common concerns and, where necessary, to compete with civility and respect when their concerns conflict.

The problems will need to be faced at two levels. Individual campuses will need to become forums for the education of their own members about the issues and for debates about their resolution. Many faculty have only the sketchiest notions, often wrong, about how their own institution operates and what its real needs and costs are. That condition will need to change. Moreover, the debate will need to be more than a conversation between scientists and institutional administrators, for what will be abundantly clear is that reductions in science funding or in federal support for student aid—the most vulnerable categories—can be replaced by institutional subsidies only at the expense of resources that would otherwise go to other activities. Those are not decisions that will be easily made. Nor can the tension between the claims of the present and the less tangible but no less important ones of the future—a tension that scarcity always brings with it—be thrashed out in ignorance or in private.

While each institution grapples with its own problems in its own way, it will be necessary to find ways to guide policy makers at the national level to decisions that will make the best of a bad time. That will not be easy, either. Indeed, it may well be harder for national organizations to reach common understandings and agreements than it is separately for the institutions and individuals they represent. One of the most striking developments of the last two decades has been the growth of the number of academic interests represented in Washington. Since they multiplied and grew in relatively conflict-free times, they also grew in relative autonomy, each pursuing the interests of its members, which in most cases consisted of claims for more money. As a result, important areas of policy are heavily influenced by campus officials who have far less influence on their own campuses than their representatives have in Washington. That source of distortion is compounded by the way in which real but small differences on campus can become large and emotional ones as they are abstracted from their campus contexts, aggregated nationally, and amplified by special-interest organizations.

For these reasons and others, the academic community is ill-prepared intellectually and organizationally to deal with the issues produced by diminishing resources. It is unlikely that new structures can or should be invented for the purpose, so it is up to those that exist and that have the broadest and most comprehensive view of science, scientists, and universities to take the lead. Current conditions and needs will need to be better documented. For example, a more textured and nuanced description of the need for the construction and renovation of scientific facilities will need to be developed to take the place of the existing extrapolations from anecdote to national policy. The current debate between full funding of research and the maintenance of a guaranteed number of research grants needs to be informed by better analysis of the effect of alternative policies on such matters as institutional stability, the careers of young scientists, and the willingness to take risks on problematic but potentially high-yield research topics, to mention but a few. Those are topics that derive from research only. There are others that bear on other institutional responsibilities, including, of course, graduate education, and that, therefore, need also to be taken into account in thinking about science.

Information and analysis need to be accompanied by consultation and debate which engage the major interested parties. For that purpose, national organizations must bring the issues to their members, but beyond that, they should do so in ways that illuminate the areas of conflict by bringing their members together with those who view the issues from other perspectives.

Unless we know more than we know now and understand better the circumstances that lie ahead, consultation and debate will be sterile and frustrating. In that event, we may expect policy to be determined solely by battles between battalions of advocates whose purpose is to win as much as they can for those they represent and whose practical concern for the system as a whole extends no farther than the boundaries of their membership. The nation deserves better.

**From the Proceedings of the First Annual Meeting,**
**Council of Graduate Schools in the United States,**
**Washington, D.C., December 14–16, 1961.**

## THE ESTABLISHMENT OF THE COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

For some years, there has been a growing recognition of the need for a national organization of graduate schools which would be truly representative of American graduate education and would be able to act on behalf of all the graduate schools of the country. No such organization has previously existed. The previously established associations of graduate schools are either regional or represent limited segments of graduate education. The matter has been discussed at various meetings of graduate deans, and effective action was initiated by the Association of Graduate Schools (AGS) in the Association of American Universities at its meetings in San Francisco, October 24–26, 1960. This Association took official action, directing its Executive Committee "to exert every effort toward establishing a new Council of American Graduate Schools."

> "As envisioned by the AGS, the new Council would be independent of organizations presently active and would be nationally representative, including as members a large majority of the institutions presently granting doctoral degrees. In the opinion of AGS, such a national organization is needed '(1) to provide a channel for bringing to bear, in concentrated and effective fashion, the wisdom and experience of all those most knowledgeable about graduate education upon governmental agencies and foundations interested in questions affecting the graduate schools; (2) to provide assistance to both the established and the newer graduate schools in the working out of new programs and in the revision of the processes and procedures of graduate education; (3) to provide opportunity for a comprehensive annual meeting of representatives of these graduate schools; and (4) to collect and disseminate information about the country's graduate schools.' " *

The AGS recommended that its President invite the presidents of each of the other five organizations of graduate deans (the Council on Graduate Work of the American Association of Land-Grant Colleges and State Universities, the Conference of Deans of Southern Graduate Schools, the Midwest Conference on Graduate Study and Research, the New England Conference on Graduate Education, and the Western Association of Graduate Schools) to appoint a representative to attend an organizational meeting. It was proposed that this committee be empowered to:

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*From a subcommittee report which was approved by the AGS during meetings in San Francisco, October 24, 1960.

1. Establish a national membership list for the Council
2. Invite these institutions to join the Council
3. Prepare a constitution
4. Call the first annual meeting of the Council and appoint its presiding officer.

The action of the AGS was concurred in by the other five organizations, and an organizational committee was appointed which consisted of:

**Doctor Robert H. Bruce**
Graduate Fellowship Section
Department of Health, Education, and Welfare
Representing the Western Association of Graduate Schools

**Dean Henry Hansen**
Graduate School
Oregon State College
Representing the Council on Graduate Work of the American Association of Land-Grant Colleges and State Universities

**Dean R. J. Henle, S.J.**
Graduate School
Saint Louis University
Representing the Midwest Conference on Graduate Study and Research

**Dean W. Gordon Whaley**
Graduate School
University of Texas
Representing the Conference of Deans of Southern Graduate Schools

**Dean Bryce Crawford**
Graduate School
University of Minnesota
Representing the Association of Graduate Schools

**Dean Gilbert L. Woodside**
Graduate School
University of Massachusetts
Representing the New England Conference on Graduate Education

Sir Hugh Taylor, President of the Woodrow Wilson National Fellowship Foundation and former Dean of the Graduate School at Princeton, offered to act as host for the organizational meeting. The meeting was set for February 17–18, 1961, at the offices of the Woodrow Wilson National Fellowship Foundation, Princeton, New Jersey. Sir Hugh Taylor accepted the invitation to serve as chairman for the meeting.

The organizational committee, following its original mandate, accomplished three things:

1. It selected a list of 100 institutions to be invited to send voting representatives to the first organizational meeting. These institutions were chosen, for the most part, in accordance with these criteria:
   - A. They awarded fifty or more doctorates during the period 1936–1956.
   - B. They awarded five or more doctorates in 1958.
   - C. They awarded doctorates in a substantial spread of fields.
2. It prepared a first draft of a constitution to be submitted to the organizational meeting. The mind of the committee reflected in this document was that the Council should be broadly representative of graduate education and that it should be a vigorous and effective representative of the graduate school.
3. Finally, the committee planned an organizational meeting, setting March 22, 1961, as the date and selecting the Morrison Hotel, Chicago, as the place. Sir Hugh Taylor was asked to preside and he graciously accepted.

Sir Hugh Taylor subsequently sent letters of invitation, together with copies of the proposed constitution, and the list of invited institutions to the Presidents of the one hundred institutions.

Some ninety-one institutions sent representatives to the organizational meeting in Chicago. At this meeting, a final draft of the Constitution was adopted and the following officers were elected:

**Dean Henry Bent** (University of Missouri)—*Chairman*
**Dean John C. Weaver** (State University of Iowa)—*Vice Chairman*

**Executive Committee:**

**Dean J. P. Elder** (Harvard University)
**Dean R. J. Henle, S.J.** (Saint Louis University)
**Dean Robert M. Lumiansky** (Tulane University)
**Dean G. H. Richter** (William Marsh Rice University)
**Dean H. D. Rhodes** (University of Arizona)
**Dean W. Gordon Whaley** (University of Texas)

The Constitution directed the Executive Committee to prepare membership criteria for submission to the member institutions. A two-thirds vote of the membership was established as necessary for approval of the criteria.

In subsequent meetings, the Executive Committee established the fiscal year as April 1 to March 31 and set the Institutional Dues at $250. A set of proposed membership criteria were approved and sent to the members for their consideration. These criteria, which were subsequently approved by the general membership, are:

1. Applicants for membership must be accredited as institutions by the appropriate accrediting agency.

2. They must have conferred at least thirty master's degrees or ten doctorates, or appropriate combination, within the three-year period preceding application.
3. The degrees conferred must fall within a spread of at least three fields which are commonly recognized to be distinct disciplines.

With the adoption of a Constitution, the establishment of its list of charter members, and the election of its first slate of officers, the Council of Graduate Schools in the United States has completed its period of organization.

The Executive Committee approved the establishment of a Washington office with a permanent president representing the Council and directing its activities. Dean Gustave O. Arlt of the University of California (Los Angeles) was appointed the first president, and February 1, 1962, was set as the opening date for the new office. The office is located in the American Council on Education building (1785 Massachusetts Avenue, Washington 6, D.C.)

# Plenary Session II

## GRADUATE EDUCATION: THEN AND NOW

*Presiding*: Albert W. Spruill, *Dean of Graduate Studies, North Carolina A&T State University*
*Speakers*: THEN: John C. Weaver, *President Emeritus, University of Wisconsin System (Graduate Dean, University of Nebraska, 1961)*
Bryce Crawford, *Regents' Professor Emeritus of Chemistry, University of Minnesota (Graduate Dean, University of Minnesota, 1961)*
NOW: Leslie B. McLemore, Dean, Graduate School and Director of Research Administration, Jackson State University
Elizabeth C. Traugott, Vice Provost and Dean for Graduate Studies, Stanford University

**John C. Weaver**

### IN RETROSPECT

I feel most privileged to be invited "home"—and I do use the word "home" with real meaning—to this first quarter of a century mark in the life of the Council of Graduate Schools. Inevitably it is, for me, a moment of wistful nostalgia. More importantly it is also a moment of reassurance—reassurance that the past is, indeed, but prologue—that a fortunate matrix was assembled from which strength and valid purpose have grown and gained momentum.

Those of us assigned to the "then" segment of this session, asked as we are to look back over our collective shoulders at earlier days, need be mindful of the venerable admonition that reminiscence (an art form that does seem to come the more naturally the older one gets)—reminiscence is the pee wee golf of the intellect.

I do readily admit that in facing up to my retrospective task, I have encountered most confounding sensations of dealing with events that at one and the same time seem both very far away, yet amazingly nearby and vividly real. But on to the mental miniature golf.

When one examines any stream of evolutionary change and the events that are moving along with the ongoing flow, it is often hard to establish a clearly identifiable point of beginning. In the particular instance of this Council, the place of origin is really not too hard to locate. The spark of ignition came, as I see it, in October, 1957. It was in that month and year that the Russians awakened the world to the dawn of a Space Age by sending Sputnik twirling into orbit around the earth.

Intercontinental missiles were becoming a reality, and we somehow seemed caught unawares. Was our science lagging? Certainly it seemed something short of the forefront along a number of awesome horizons.

Our government and its Congress quite suddenly were in a state of some panic and, in a manner perhaps more characteristic than novel, and more knee-jerk reactive than thoughtfully conceived, there was a quick casting about for places to throw big money at what was quite clearly a major national problem. And that is precisely where, in rapid and inexorable haste the established, and even the only incipient, graduate schools of the nation came in.

In the year following the launching of Sputnik a whole new symbiotic way of life involving various government agencies and the nations' universities began a massive emergence in the form of sponsored research grants. In 1940 the federal government provided $15 million to the colleges and universities of the country for research and development, and this modest total was almost exclusively destined for the traditional land grant support of the Agricultural Experiment Stations. Less than two decades later, in the fiscal year 1957–58, federal agencies spent *440* million dollars in a broad range of colleges and universities, and importantly, the aid was spread with a completely new breadth across the academic spectrum. Never before in history had the traditional graduate school domain of concern for academic research, been so heavily invaded or influenced.

Further, the anxieties of the post-Sputnik months brought the passage of the National Defense Education Act, in August of 1958. Here was an innovative package of legislation that provided fellowship aid to graduate students in unprecedented amounts, as well as cost-of-education payments to graduate schools willing to expand old programs or institute new ones in accommodation of higher levels of enrollment. There seemed, indeed, to be more than a grain of truth in the claim often heard in those days that the Russians and their new venture in space were doing more to shape our universities than we were.

Well, what were we worrying about in graduate education as the fifth decade of the 20th century merged with the sixth? I will wager that most of the things we worried about then will still have a familiar ring to those of you who today labor in the vineyard midway in the eighth decade of the century.

In the late autumn of 1958, as a rookie Graduate Dean from the University of Nebraska, just returned from a wide-ranging visit to higher educational institutions across the country under a Carnegie Travelling Fellowship, I was asked to speak to the then some 40 university presidents assembled at a meeting of the AAU at the University Club of Chicago. Let me just group a few short quotations from that address to summarize what we were fretting about in those days.*

"...we must remember"—I observed—"that while the federal agencies with research and development money to spend, and the universities willing to accept it,

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*"Federal Aid to Research and Graduate Education," John C. Weaver, *Journal of Proceedings and Addresses of the Fifty-ninth Annual Conference of the Association of American Universities and the Tenth Annual Conference of the Association of Graduate Schools*, Chicago, Illinois, 1958, pp. 82–93.

are both seeking to operate in the public interest, each group operates in a *different* area of that interest, and each holds its own distinctive objectives which in many instances, are anything but identical, or even compatible." (page 86). . . .or, ". . . .it costs money to accept money. . .(and). . .a majority of universities. . .seem to feel that the indirect costs of government sponsored research are not adequately covered by variously-computed overhead allowances. . . ." (page 86). . . .or, "An educational institution is under obligation to maintain strength of scholarship in all of the intellectual fields it seeks to cover, the social sciences and the humanities no less than the natural sciences. . .(but) government agencies have placed 95 per cent of. . .(their support). . . .in the natural sciences. . . ." (page 87). . . .or, I went on ". . .with money to offer in support of some lines of investigation and not in others, government agencies are in a position to wield a powerful and dangerous influence in 'directing' the research activities of many of our scholars." (page 88). . .or, "Grants commonly carry provisions for research assistantships. . .(for). . .graduate students. . .All too often, in aiding a faculty member with a broad sponsored research commitment, students are permitted to satisfy their thesis requirements with work done as an assistant on a small segment of a large on-going project. . .(thus robbing) the student of the independent selection (and designing) of his own research problem. . .many of our Ph.D.s (have) been trained in too large groups. . .under team research circumstances. . .Having failed properly to achieve the purposes of a doctor's degree in gaining the understanding and maturity to undertake independent research, they are (increasingly) compelled to return to an academic setting (as post-doctoral fellows) to learn what they should have learned before their degrees were granted." (pages 89–90)

Well, these are samples of graduate school concerns within universities having to seek new ways of living in an academic world much more closely entwined than ever before with a differently and powerfully motivated, and most insistent, federal government. Is it any wonder that the notion might have arisen that the graduate schools of the United States had need of getting organized on a broad national scale in order that they could confront effectively, even imaginatively, a challenging, if not perilously uncertain, future.

In 1960 I served as chairman of the *Committee on Policies in Graduate Education* of the Association of Graduate Schools. My fellow committee members were Dean Alexander Heard of the University of North Carolina Graduate School at Chapel Hill, Dean Robert Lumiansky of Tulane, and Dean Joseph McCarthy of the University of Washington. At my invitation this intrepid group, together with the then President of the AGS, Dean J. P. Elder of Harvard, met on June 22 and 23 in Lincoln, Nebraska. Out of those two days came the plan (even a tentatively drawn constitution!) for a Council of Graduate Schools.

It was clear that graduate education in this country had come to the day of needing a voice in the decision-making halls of Washington—a voice far more broadly based than could be provided by the overly exclusive, then forty member body of the AAU-confined Association of Graduate Schools. Fortunately we were successful in selling our proposal to the AGS membership as it gathered in annual meeting that October in San Francisco. An outline of the rest of our organizational origins is carried in the centerfold of your program.

Some things haven't changed over the years; some things have. Twenty-five years ago, as Graduate Dean at Nebraska, I was your Chairman-Elect. this anniversary year your Chairman-Elect also hails from Lincoln. Good old Nebraska! A quarter of a century ago as this Council met for its first annual meeting at the Mayflower Hotel in Washington D.C., a program footnote said that direct limousine service to the airport (a distance of some four miles) was available for $1.50, and cabs could be had to the railroad station (18 blocks away) for 50 cents. I would be interested in where a dollar and a half (or fifty cents) is going to carry you from this hotel in 1985? I don't think you could make Disneyland!

Other things about the programs for "then" and "now" seem more similar. In 1961, Sterling McMurrin, then United States Commissioner of Education, spoke to the opening Plenary Session under the title: "Responsibility and Participation of Government in Higher Education"; the second 1961 session heard a panel including Deans Heard and Lumiansky, Congressman John Brademas of Indiana and Senator Wayne Morse of Oregon, discuss: "The Relationship of the Federal Government to Institutions of Higher Learning." So, twenty five years later, you will conclude this afternoon's work with commentary from the House of Representatives in Washington!

I am proud to say I had some modest part in persuading Gus Arlt to leave UCLA for CGS. As one from the Middle West might say: He done us all proud. I join you, most enthusiastically, in your salute to him.

May I also salute this Council for what it has become: a sustaining force for the protection of the quality of the top rung of the ladder of academic achievement; a united and vocal advocate for the needs of American graduate education; a causeway of understanding between the delicate and indispensable realm within which is handed on the torch of creative learning, and the dependent, yet very independent, federal realm of political interest and action. May you advance to the half century mark with growing strength and rising aspiration.

**Bryce Crawford**

My pleasant assignment in this session is clearly on the "then," a perspective which I share with my old friend John Weaver as we share the platform today. Twenty-five years ago we were both graduate deans, he at Nebraka and I at Minnesota; he went on to the presidency at Missouri and at Wisconsin while I after a bit quit while I was ahead. But we were both "present at the creation" of CGS, and indeed John was more importantly involved than I, since he chaired the committee on policies in graduate education of the Association of Graduate Schools when, at the AGS meeting in San Francisco in October of 1960, that committee came in with the wise and thoughtful and courageous recommendation that the AGS proceed to lead the regional graduate deans' groups then existing in the formation of a national and genuinely representative organization which would have a broadly based membership enabling it to speak for all of graduate education in the United States. It was something of a bold recommendation, though of course all of the members of the committee recommending this step realized that they would not have to implement it personally.

That happened to be the year that I came into the AGS session as a rookie dean; I had found that the graduate deans' job had both interest and problems, and in the deaning business I had found quite a few old friends. Partly this was because such a large number of graduate deans come out of the scholarly discipline of chemistry, as I did; I believe this is still true to a certain extent, and the reasons for this have always been a fine field for discussion, one of those areas wherein it is better not to strive for a definitive resolution. At any rate the incoming president of the AGS, Dean Fred Wall of Illinois, being a fellow-chemist and a friend of mine, thought of me when, in proceeding to implement the recommendatin of John Weaver's committee which had been adopted by the AGS membership, he needed to appoint some dean to represent the AGS in going forward to organize the recommended new organization which, or course, became the CGS we are now celebrating. I don't need to rehearse at this time the details of that motion adopted by the AGS, since they are given quite completely and in historical perspective in the quotation from the Proceedings of the First Annual Meeting of the Council of Graduate Schools, December 1961.

So it came to pass that I journeyed to Princeton in February of 1961 to join with five other deans—Bob Bruce of Wyoming for the Western Association of Graduate Schools, Henry Hansen of Oregon for the Land Grant Association, Bob Henle of Saint Louis for the Midwest Conference on Graduate Study, Gordon Whaley of Texas for the Southern Conference, and Gilbert Woodside of Massachusetts for the New England Conference—in forming the new organization. We met at the invitation of Sir Hugh Taylor—another chemist and a great one—who was president of the Woodrow Wilson Fellowship Foundation, in the Princeton offices of that Foundation; and thereby we gained not only a most pleasant venue but the benefit of advice and counsel both from Sir Hugh himself and from a senior member of his Foundation staff, Hans Rosenhaupt, whose activities in and contributions to graduate education many of us here will remember.

We understood well enough what our task was, and the situation "then" which definitely called for such an organization as the CGS; we had the report of John Weaver's committee, and the backing of the regional graduate school associations as well as the AGS. We were aware that the graduate enterprise in this country desperately needed a single strong voice addressed to and concentrated on graduate education and its needs and problems and opportunities. We knew that the AGS was inhibited by its situation within the Association of American Universities; and the AAU, though an estimable organization then as now and one which has done yeoman service for universities, is not sufficiently broad-based to speak for graduate education in its full range in this country, and moreover is quite properly concerned with many other aspects of universities and hence cannot concentrate on those affecting graduate matters. I need not here go into the specific problems which graduate schools faced as the '60s began; Dr. Rosenzweig has just given us at lunch a superb—if somewhat depressing—paper recalling the situation at that time, the provisions of Title IV of the NDEA, the wisdom of Homer Babbidge, and so on.

So we sat down as a constitutional convention to form an organization to speak for graduate education, principally in Washington, but in other ways and forums also. This sort of thing is done by writing a constitution and then inviting the right group to meet and join the new organization; and quite sensibly we concerned ourselves early on with the invitation list. Clearly this was not to be an elite group; we felt we should pull together about a hundred; so we set up the appropriate criteria. You know how this is done, too; you assume some trial criteria, check to see how many would be thus invited, and go back and fine tune the criteria until the number comes out right. We did very well on about the second pass, coming out at 99, and at that point in a burst of inspiration Sir Hugh suggested that we take those criteria and that group and add Rockefeller University, which had just created itself by changing the name from Rockefeller Institute. So we had the even hundred. The membership criteria held up pretty well too, though as CGS moved along and grew, and I sat on the continuing Membership Committee for a few years, we occasionally had a close decision to make. At any rate we started out by inviting about as well chosen a group of institutions as one could ask for.

And I believe we wrote a good constitution also. We had a fairly clear idea of what we wanted—and did not want. We did not want a loose group operated by a committee, with perhaps a representative in Washington bearing the title of Secretary to the Council or Executive Secretary or the like. We wanted a well organized Council, strong, and we hoped wise, informed, and representative not only of the large research universities but also of the smaller institutions with major emphases at the master's level, which formed then as they do now an important component of our graduate enterprise. We wanted a full-time officer in Washington who had the authority of this Council in back of him and who was in a position to speak out, quickly when necessary, on behalf of graduate education. It was clear that we wanted someone with the position and stature and title of President, though I don't believe the constitution used this title. We didn't know it but we wanted Gus Arlt, and through the wisdom and good fortune of our first Executive Committee and the grace of God we got him. And I needn't remind you that Gus Arlt took our constitution and our plans and our hopes and built a CGS fulfilling our best aspirations.

There were then as now a number of problems confronting graduate schools. Many of them are eternal and continuing ones standing out for discussion on our meeting program today as they were at that first meeting twenty-five years ago—graduate programs for teachers, off-campus graduate education, admission of and support for foreign students, the master's program, and so on. Financing and managing research facilities and equipment was a problem then, though it's grown enormously and frighteningly; and the particular facility known as The Computer has certainly expanded in importance and in need for management.

Fellowships and assistantships and loans for the students were of course one of the problems, especially the big problem of Title IV of the National Defense Education Act. I suppose that for a device with a sensible purpose NDEA Title IV was the most awkward construction since the original committee invented the original camel. Dr. Rosenzweig said at lunch that if it hadn't been for NDEA Title IV we wouldn't have CGS here and I think that's true, but it's equally true that CGS as one of its first contributions worked with Homer Babbidge to make that ridiculous hunk of creaking machinery work so that it avoided disaster and in fact did more good than harm.

And CGS has continued through the years to justify its existence and a bit more. It has helped with other fellowship programs since NDEA. It has helped in putting some guidance into the machinery for federal programs in support of education. It has helped in providing a forum for graduate deans to discuss their problems and work together to find answers. It has helped in providing workshops where rookie graduate deans can learn from the distilled wisdom and the observed mistakes of other deans. It has helped notably in the process of self-evaluation of graduate departments.

Certainly I can't tick off all the things CGS has done in its quarter century; but I do want to take a moment to touch on one area of importance wherein CGS has done some good work, and where I seem to detect slippage: graduate education for our minorities. I do not follow these matters as closely as I once did, but whereas there had been considerable and encouraging progress there are signs of serious falling off in the last five or six years. Of course this goes beyond the graduate community; but I hope the graduate community and CGS in particular can recover the program and renew its vitality and effectiveness; it's centrally important. I'm not concerned over providing benefits for the minority students, though any professor likes always to help any student; I'm concerned because our nation needs to provide for itself all the fully developed brainpower it can muster—and there's a lot of brainpower in those minorities!

Finally I want to mention a central aspect of CGS which was present "then" and which, thank God, is still present "now." CGS is very nearly unique among educational associations of its type in that it has always kept a focus on scholarship per se, scholarship for its own sake. I think this is partly true because of Gus Arlt's personal character and strong scholarship; in this regard as in so many others he got CGS started in the right way. But it's also true because of the central role of the graduate school and of the graduate dean in a university. The graduate dean and the arts college dean have very privileged positions; they and their colleges are not in place primarily to solve problems of society, nor to train professionals. They're interested in helping, of course; and the graduate dean does a brisk business in M.B.A.s and M.P.H.s and assorted professionally oriented master's programs, and if his institution is well constructed he interacts with mutual profit and benefit with the law school and the medical school and the agriculture kingdom and so on. But the graduate school isn't really there to supply answers; it's there to see to it that the right questions are asked. So we hear the graduate dean referred to as the conscience of the university; and he has the finest job on campus. He is there to single out and support the scholarly, and therefore the essential and eternal characteristics of graduate programs.

So it was with real pleasure that I noted the continuing presence of scholarship itself among the concerns of CGS. The first plenary session devoted attention to some review of the "state of scholarship" in a couple of fields, and we learned a bit about what's going on in linguistics and in literary criticism. And the presentation of the Gustave Arlt Award gave further evidence that CGS keeps a focus on scholarship, and of the value of the focus. Professor Martin, in his gracious word of thanks on receiving the Award, told us something of his course of thought and his concerns as he carried out the piece of beautiful scholarship which was recognized; and it was clear that the Arlt Award was an important reassurance to him. It is indeed a formal indication from the CGS that it is a good and commendable thing to follow one's best scholarly instincts in pursuing a study, and not to distort it to fit a trend or to supply an answer. As long as CGS keeps that philosophy central in all its work, it's likely to do a great deal of good.

Permit me to quote the inscription on the facade of Northrup Auditorium, our central building on the University of Minnesota campus. It reads:

> THE UNIVERSITY OF MINNESOTA
> Founded in the faith that men are ennobled by understanding
> Dedicated to the advancement of learning and the search for truth
> Devoted to the instruction of youth and the service of the state

Those last two lines speak to important purposes of graduate schools, the advancement of learning and the service of the state and the instruction of youth, which is to say the search for answers to society's problems and the shaping of tools for society's tasks and the education of leaders for society's work. But the first line reminds us that underlying and undergirding and strengthening these uses of education and rising above them is scholarship and the faith that men are ennobled by understanding. I hope that CGS, into the future as "then" and "now," keeps that central focus clear.

**Leslie B. McLemore**

## Graduate Education—Now

I read with a good deal of interest the proceedings of CGS and AGS meetings that took place 25 years ago. As I read the proceedings, I was struck by how much things change and by how much things remain the same. Some of the profound issues in graduate education then are still with us. In some cases they have taken on a different form but basically they are the same in so many ways. The central issue of quality is an ongoing one in the graduate education enterprise. Quality was an issue then and it is just as important today. The issues surrounding the notion of quality are many: What constitutes a quality program? How does one effectively measure quality? How can we insure that quality permeates the entire graduate program? The answer to these and many other questions about quality will never be universally agreed upon. However, it is important to remember that graduate programs must strive for excellence. There is really no substitute for excellence in graduate education.

We are faced with the lack of support from the federal government—*for students, for faculty, for libraries, for scientific equipment* and *for curricular development resources*. The role of the federal government must be expanded as we deal with the issue of quality education. We can not provide the kind of educated citizens that this nation deserves without the federal sector playing a more vigorous and visible role. It seems to me that as deans and scholars we are obligated to play a larger role as advocates for graduate education in America. Our gatekeeping role must be greater than at any other time in our history.

The number of foreign students must also be addressed. For instance, will the federal sector or state legislature continue to support graduate programs with an overwhelming number of foreign graduate students? Is there a limit to the number of foreign students that we can maintain in our programs? What impact does this issue have upon the public vs. the private college or university? Additionally, what impact will it have upon minority institutions in the long-run?

The proliferation of graduate programs is another issue that has to be addressed. What can be done, or should be done, to discourage the number of new programs, especially at the master's level? Is there a role that this organization should play in that process?

The assessment and proliferation of off-campus programs—continuing education—is an issue that we all have to deal with on a regular basis. I do not know what the answer is, but I'm constantly faced with the quality of the off-campus offerings.

*The social responsibility of graduate education should be a driving force in our work*. The wise words of Father Hesburgh should remain with us. You may recall that he reminded us that "Graduate schools were born of the need for greater excellence in our pursuit of education and professionalism and culture in our society." We are obligated to speak to the needs of the nation and prepare our students to address those needs.

Lastly, what can we do to make the new cooperation between universities, industries, and the federal government a meaningful one. What does this cooperation mean? Are we obligated to train students just for industry and the federal government?

These are just a few of the issues that we must deal with now and in the years to come.

**Elizabeth C. Traugott**

My "THEN" twenty-five years ago was my first year as a graduate student. My "NOW" is my first year as dean of graduate studies. As the other speakers have emphasized, many things have not changed, among them worries about financial aid, the continued (though now more noticeable and necessary) resistance to government intervention, and the fight to resist the pull to do research that is fundable first and intellectually important second. These issues pertain primarily to the relation between the graduate dean and the external world. Today I would like to share with you some concerns that I am addressing in my first year, concerns that focus on internal campus issues.

If external issues have not changed dramatically, there are, I think, some quite significant internal philosophical changes. Here, of course, problems of quality, of grade-inflation, and of recommendation-inflation loom large. But there's an even more fundamental question—an old one—that seems to be getting new answers as perceptions change, and it is this question that I want to address:

What IS a graduate student?
  a learner, studying?
  a contributor to research, a teacher?
  one who brings diversity?
  one who continues in the academic profession?

Much of what I have to say concerns doctoral students primarily, but it has a bearing on other graduate students as well.

With regard to the graduate student as learner, there is the challenge to the faculty of training, not to carry on the tradition, but to do something new. What is novel here? In part, there is the shift from purveying knowledge, from developing patterns of loyalty, to challenging, to seeking to make our students not followers but better than ourselves. Particularly interesting is the fact that this perspective on the student as learner is reinforced by a number of what seem diametrically opposed developments in our disciplines. In the humanities, it arises from the perception that there is no longer any body of knowledge to purvey and therefore to learn. In the sciences, engineering, medicine, and so forth, it comes from the perception that knowledge is expanding so rapidly that today's body of knowledge will be out of date tomorrow, even though it exists (yes, very firmly exists) and is the foundation of tomorrow's work.

For the student this translates into a perception of entitlement—entitlement to good teaching, and entitlement to good advising. Students now seek counselling that does not just prompt ("this is *when* you have to fulfill such and such a requirement"), or just monitor ("this is how you have done at such and such"—a statement easy to quantify and put into a computerized data-base that depersonalizes the student), but also mentors ("this is a hard-nosed look at your whole professional profile, prospective as well as retrospective"). In the '70s we worried about nurturing and overdid the non-threatening environment. Students as well as faculty find this is not enough anymore.

The sense of entitlement to good teaching and advising of course leads to grievances if the student perceives the faculty have failed to provide what they should. Truly good advising, a good system of grievance procedures that are widely known, and open discussion of the issues should all help to avoid most grievances. But if they don't help to make all this possible, graduate deans will find themselves devoting more and more of their time to litigation rather than the intellectual quality of the program.

With regard to the graduate student as contributor to research and teaching, it is an old idea that, as faculty, we learn from our students. They are not just vessels into which we pour knowlege, but (unequal) partners in our research and teaching. Again, the question of loyalty versus challenge is an issue. But here there is an additional one as well. Relatively new is the student's sense of being a member of the work force, with entitlement to tuition and stipend. The stipend becomes a salary, and expectations grow about appropriate training and evaluation. This is nowhere clearer than on campuses in which TAs are unionized; but even where they are not, the perception is still present.

Another relatively new challenge is the number of faculty who become consultants in industry. This may be old news in engineering and physics. But in humanities subjects like philosophy and linguistics it is relatively new, the result of research in logic, artificial intelligence, and language as a computational system. What happens when a student is an RA for a dissertation adviser who is consulting with Boeing on a communications satellite project? When does conflict of interest between the university and the industry project arise? Whose property is the student's work? What are the risks of suddenly finding oneself doing classified research?

In response to problems like these, we need to build programs to train TAs and researchers, and to evaluate them. We need avenues for open discussion in departments and schools about conflict of interest and intellectual property, not just in cases of patents and copyright, but of coauthorship and credit. These are issues for the university at large, for the humanities as much as everyone else. As graduate deans we need to do a lot of consciousness-raising here, because our students tend to be a lot more aware than we of the problems in certain areas.

What of the perspective on the graduate student as contributor to diversity? A number of issues are important here, but I will mention only two. What is our role in teaching foreign students? We have traditionally opened our doors. But, as in the fifties and before, some would argue once again that this should be stopped because all we are doing is giving free technological training to competitors in the world market. Maybe we do lose some of our ideas to competitors. But we would lose far more if we did not take a firm stand on open admission. We need diversity to survive and get new ideas ourselves.

The second issue I want to touch on really does reflect a change from twenty-five years ago. Enormous steps were made in the seventies toward affirmative action. But now they seem to be eroding rapidly, at least where ethnic minorities are concerned. Departments in humanities and sciences say: everyone has gone to the professional schools. But some of the professional schools, especially the medical schools, say they aren't there either. I am sure you have all read the recent article in *Time* (November 11th, 1985) reporting fall-offs in minority medical-school attendance nationwide. We need to counteract by vigorously seeking new funding, but even more by promoting the idea of graduate school earlier than we do now. It is not traditional, I think, for graduate deans to focus on the high schools, but maybe we need to join our undergraduate admissions officers in outreach to precisely those institutions. Also, I think that, with enough careful planning and cooperation, the M.A. schools could serve as excellent feeders to the Ph.D. programs, and could do much to help make the bridge for minority students.

Whatever we do, we need to provide excellent peer counselling to the various diverse groups we bring to graduate school, peer support that is aware of the need to address the problem of how to resolve cultural differences, while respecting those differences. Without that, all that will ensue is conflict, or acculturation that eliminates the very diversity we need.

In regard to the fourth perspective on the graduate student that I identified, professional continuity, the graduate student of twenty-five years ago for the most part went on to teach at the university. This has changed dramatically. Professional schools like the business schools have come to play major roles on campuses. The expansive job market of the sixties has tightened so much that many have sought what we have tended to call "alternative careers." This is a terrible misnomer that reflects an old idea—we should not let our students feel it is a disgrace not to be clones of ourselves. The danger, though, is that industry and the private sector can and have become too attractive. Now, when the job market is opening up again a bit, we find ourselves desperately in need of attracting the best students to academic positions. If we don't, the professoriate will be in disarray. But of course we need to be able to predict that there will be positions, and we need to pay well.

The good news is that the academic job market does look reasonably good for the early nineties. But we must not paint too rosy a picture and mislead our students. If retirement is uncapped, as many people seem to think it will be, the universities will have fifteen years or so of grace, but then they too will be subject to the non-retirement laws. It is a good exercise to project what that would do to our current faculty picture. A glance at the projection figures for 2010, twenty-five years from now, tells you something very fast: either the average faculty member will be over fifty, or tenure must go. We will have to understand what this means and prepare ourselves and our students to find solutions—or stop the legislation.

So you see I couldn't keep from external issues after all. This is perhaps the most important message for the "now"—almost nothing at a university remains unaffected by social change and by government. The challenge is to be sure that the affect goes both ways, and that almost nothing in society and government remains unaffected by the universities. When I was a graduate student we agonized over being in the ivory tower. That ivory tower is definitely not standing today. (Perverse as we are, perhaps we have some nostalgia for it . . .)

I should like to thank the associate and assistant deans of the Graduate Division at Stanford, most especially Cecilia Burciaga, for discussing many of these issues with me. It should go without saying that they do not necessarily agree with any of the views expressed here.

# Plenary Session IV

Friday, December 13, 1985

## MINORITIES IN GRADUATE EDUCATION—PAST-PRESENT-FUTURE

*Presiding:* Wimberly C. Royster, *Vice Chancellor for Research and Dean of the Graduate School, University of Kentucky*
*Speakers:* Sarah Melendez, *Associate Director, Office of Minority Concerns, American Council on Education*

### Sarah Melendez

It is interesting to trace CGS' interest in minorities throughout your 25-year history. It appears that the first discussion of minorities at a CGS meeting occurred in 1963. I'll come back to that in a little while.

Another reason for taking stock of where we've been, where we are, and where we might be headed is that there are many folks around the country, especially in Washington, who are saying that the special programs to increase minority participation back in the late sixties have not worked, or are no longer necessary. Many urge a return to the good old time of meritocracy. I'm sure if you all look at those who are still around your campuses from those good old days, you will become convinced that meritocracy never existed or in many cases did not work.

Let's take a look at the past for minorities in graduate education. I don't have to remind you that there was not too much discussion on the topic anywhere before the unrest of the sixties.

In 1963, Leonard Beach addressed a CGS session on "The Negro in the Graduate School." He said that about 1,200 Ph.Ds. and 600 Ed.Ds. had been awarded to negroes in all the history of higher education in the United States. In 1963, there were about 500 enrolled in doctoral programs—about 75% of them in education. Eighty-five percent of black doctorate holders were teaching in black colleges and only 10 percent were in white colleges, or about 180.

Dr. Beach was encouraged by a statement from a dean of an Ivy League University who had stated recently:

"We have under consideration a program of recruitment of negroes to our graduate school and a plan to permit students of potential ability, stability, and motivation to be admitted under conditions by which they could repair deficiencies in their training through undergraduate courses or by other means."

Dr. H. W. Magoun, at that same CGS meeting, quoted the Chancellor of UCLA who had said earlier that year:

"If the number of negroes entering university teaching and research is to be increased, the process must begin by expanding the enrollment of qualified negro students at the graduate level."

Sound familiar? Déjà vu? It seems that the only thing that has changed is some of the terms used.

The talk during the sixties was of negro, then black students. This changed to disadvantaged students. It wasn't until the seventies that the term "Hispanic" gained currency.

In fact, it wasn't until 1974 that CGS had a presentation dealing with Chicanos in graduate education. Rudolph de la Garza talked about a study conducted for CGS and GRE by Bruce Hamilton, "Graduate School Programs for Minority/Disadvantaged Students," which concluded that, "few schools have systematic recruitment mechanisms for identifying prospective Chicano students."

What was the picture in the seventies? It had improved significantly from 1963 levels.

In 1970, 2.3 percent of life and physical scientists had Spanish surnames while 2.0 percent of teachers and 2.2 percent of engineers did. The problem with these figures is that we don't know how many of these were Latin Americans or Cuban refugees. We know anecdotally and intuitively that only about half of these were Chicanos or Puerto Ricans—home-grown minorities.

De la Garza also talked about the problems faced by Chicanos once admitted which were similar to those faced by black graduate students: curricula unresponsive to the needs of Chicano interest in Chicano problems and their solutions; studies programs that were implemented were considered inferior by professors of European history and literature, who knew nothing about Chicano history and literature; the lack of black and Hispanic professors resulted in a dearth of role models and mentors for minority students.

This was talked about at CGS eleven years after you were told about new programs to increase minority participation in graduate schools.

Here it is eleven years after that. What does the present look like?

## The Present

In 1984, the U.S. Office of Civil Rights (OCR) had a Technical Assistance Handbook prepared on *Minority Enrollment in Graduate and Professional Schools*. The opening sentence of its introduction said:

"Minority enrollment in graduate and professional schools reached a peak in the latter part of the seventies. Since that time there has been steady erosion of the gains made during the previous decade."

There is the response to contentions that special programs don't work. They did and do work and continue to be needed.

The study found that recruitment, admissions procedures and requirements, and financial assistance were "three pivotal factors which influence minority enrollment in professional and graduate school." What a surprise!

By 1976, blacks represented 6.0 percent of total graduate enrollments. This declined to 5.7 percent in 1978 and to 5.5 percent in 1980. More alarming is the decline of first-year graduate enrollments from 6.4 percent in 1976 to 6.1 percent in 1978 and 5.5 percent in 1980.

This picture is equally bleak for Hispanics, who continue seriously underrepresented even in states where they are highly concentrated. In California, in 1980, Hispanics accounted for 4.9 percent of graduate enrollments but over 20 percent of the total state population.

Total U.S. minority enrollment in graduate education in 1980 was one percent—compared with 20 percent of the population.

Degrees earned present a worsening picture. Blacks sustained a total loss of 18 percent in master's degrees earned between 1976 and 1981 and their share dropped from 6.6% to 5.8%.

While Hispanics had a 22 percent increase, their share rose from a paltry 1.7 percent to 2.2 percent. American Indians had a healthy increase of 32 percent, but still represent a mere 0.4 percent of the total.

The erosion continues into the doctoral level where, despite gains by all minority groups, the underrepresentation continues to be serious.

The total minority share of doctorates increased from 6.8 to 8.3 percent.

In 1981, blacks, Hispanics, and American Indians earned about 6 percent of all doctorates, while foreign students earned 12 percent.

As in 1963 and 1974, in 1981 (and even 1985) minorities continued to be overwhelmingly concentrated in education. In 1981, 50% of master's degrees and 49 percent of doctorates earned by blacks were in education. For Hispanics it was 38 and 29 percent and for American Indians 44 percent for both degrees.

This does not mean we have parity in education, much less faculties of education, or even in elementary and secondry teaching. It merely means that we are very seriously underrepresented in all other fields.

The OCR study corroborated the findings of the 1982 "Final Report of the Commission on Higher Education of Minorities," as well as de la Garza's comments to CGS in 1974, and those of a survey of black students in eight white institutions conducted in 1982. They all found:

- Financial aid continues to be inadequate.
- Minorities receive fewer TAs and RAs which are preferable for the mentoring, research experience and informal networks they provide.
- The environment is often hostile—from cases of subtle "put downs" (e.g., "you should be grateful we got money for your kind") [from a graduate dean], to not calling on black students sitting right in front of them, to overt racism from students calling them "niggers."
- Lack of faculty with expertise or interest in research interests of minorities. (Black faculty in 1981 represented 4.2 percent of the total. Hispanics were 1.6 percent and American Indians 0.3 percent. Many of these were in ethnic studies and faculties of education.)

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- Dearth of mentors. White faculty seldom mentor minority students. This is not necessarily out of racism—merely business as usual. We know how difficult it is to get faculty to change behavior or attitudes.

In 1984, then ACE president Tim Healy called for a renewed commitment to equity for minorities and stressed the need for increasing black and Hispanic Ph.Ds. in order to increase faculty and thereby increase the ability of institutions to recruit and retain minority undergraduates.

Healy's speech was picked up by the national press and may have given the final nudge to the Ford Foundation which soon after gave a large grant to the National Research Council to establish a minority graduate fellowship program again. Now for a look into our crystal ball.

## The Future

The crystal ball right now looks cloudy. The future for all graduate education does not look particularly rosy. Gramm-Rudman probably put the seal on that.

A report to the President on graduate education by the National Commission on Student Financial Assistance in December 1983 stated:

"Unless our graduate schools receive the support they require, they will not be able to respond to the nation's imperatives and expectations."

It is obvious that if institutions do not receive support, minority representation will continue to be in serious trouble. Some of us fear that programs to increase minority participation will be among the first casualties.

John William Willard, President of the Council of Learned Societies, told the Commission on Students Financial Assistance that "it is essential to include the diversity of all of our peoples and experiences in the intellectual life of the nation."

If the stagnation and the decline in minority participation in graduate schools continue unchecked, there will be fewer minority professors and researchers at a time when the minority proportion of the population will be at an all-time high—25 percent by 1990 and one-third by 2000.

Today's *L.A. Times* has a story on a conference on immigration that took place yesterday at Fullerton. Conferees were told that California will probably be 58 percent minority by the year 2000.

Can the nation afford to lose the talent and the diversity of perspectives of one-third of its people?

This group—CGS—needs to make a commitment to the desirability of diversity and to increasing and maintaining such diversity on your faculties and in your student bodies. When we make such commitments explicit and develop goals and plans for achieving them, our creativity, energy, and resource allocation usually rise to the challenge.

# Business Meeting

*Presiding:* Robert E. Gordon, *Chairman, CGS Board of Directors, and*
*Vice President for Advanced Studies, University of Notre Dame*
*Chairman's Report:* Robert E. Gordon
*President's Report:* Jules B. LaPidus, *President,*
*Council of Graduate Schools in the U.S.*
*Financial Report*

## CHAIRMAN'S REPORT

**Robert E. Gordon**

I will limit my remarks to a brief summary of Board activity since our last annual meeting.

The Board met three times in the past year: March in Washington; July at Western Washington University, Bellingham; and this past Tuesday here at Anaheim.

The Board tussled for the first two meetings with the need for a broader financial base to support the activities commensurate with your expectations. We envisioned a base resting on three pillars:

- an increase in dues
- an increase in the number of member institutions
- fund raising for planning and for specific projects.

After much discussion we proposed the dues increase that was the subject of a vote by the membership this fall. I am extremely pleased to report that the dues increase was approved by a majority of the member institutions.

The Membership Committee, under the able chairmanship of Eugene Piedmonte, recommended, and the Board approved, ten institutions for admission as new members. They include:

Pace University
University of Colorado at Denver
Northern Michigan University
John Jay College
Salisbury State College
Lesley College
Assumption College
Sarah Lawrence College
University of New Rochelle
University of California, Santa Cruz

We now include some 390 institutions in our membership.

Lastly, on the fund raising front, President Jules LaPidus has begun with great success. His initial effort resulted in a grant to support the planning effort. He will report on this activity.

On the governmental relations scene, the Board reviewed and approved in principle a position paper from CGS entitled "Reauthorization of the Higher Education Act: Recommendations Concerning Graduate Education."

At the third plenary session yesterday, you heard Tom Linney state that the House Resolution contains much of what was recommended. In an effort to obtain some of the same elements in the parallel bill from the Senate, the Board wired members of the Senate Subcommittee engaged in the markup last Tuesday. "We were—he said dryly—somewhat less successful!" But we will persevere.

In between Board meetings, Thomas keeps us informed. The situation with respect to taxation of graduate teaching assistant tuition reached a point at which, in my judgement, the membership should be informed. Additionally, a critical point in the development of Reauthorization legislation was reached. Thus, under date of November 7, a Legislative Alert was sent to each member institution. This is a first in my memory of our legislative relations program.

The alert recommended several actions. I for one followed those recommendations. I trust that each of you acted upon one or more of the recommendations. Our legislative relations program assumes a grass roots action. It will be only as effective as your active participation in it. The legislative alert mechanism is to be used sparingly—but when it is used, it demands a response from each of us.

Incidentally, one measure of the notice being given CGS activity in this area is that the legislative alert on graduate student taxation was picked up and sent out as a part of the governmental relations package to the financial aid officers of our institutions; also via COGR/NACUBO. That speaks loudly of our effectiveness as a voice for graduate education.

The 1985 Summer Workshop at Western Washington was by all reports a success. The Board participated in this annual ritual to pass the accumulated wisdom of the ages, with occasional new insights, to those who would participate in our profession! The Board approved Charleston, South Carolina, as the site for the 1986 Summer Workshop. The Workshop is set for the week of July 13. The Board recognized a need to plan ahead, and the staff will be looking at potential sites for the next several years.

The annual meeting location schedule has also been reexamined. We have been meeting in Washington every third year. The board noted that meeting in Washington increased the potential for meaningful interaction between CGS and congressional and administrative leaders, and between individual members and their congressional delegations. After considerable discussion the Board agreed that we should move to a schedule of meeting in Washington every other year, and do this as quickly as possible. Given the existence of contracts for San Antonio in 1986, Washington in 1987 and Colorado Springs in 1988, we will move into the new cycle in 1989 with a meeting in Washington.

As a part of the development of a data base on graduate education, the Board tested a trial questionnaire designed to obtain information about the graduate deans and their associates, and the institutions they lead. The instrument has been perfected and will soon be sent to each member institution. As you will discover, the questionnaire seeks to obtain a measure of your experience and skills so that we might better locate among the membership specific expertise needed for particular projects.

The Board selected Charlene McDermott, Dean of Graduate Studies, University of New Mexico, for appointment as the 1985–86 Dean in Residence. Dean McDermott continues the rich tradition of providing great insight and sharing her experience for your benefit in the CGS front office.

The Board reexamined and reaffirmed the importance and utility of the Dean in Residence position. Please give some thought to this—we need nominations for 1986–87.

Finally, David Sparks, University of Maryland, was elected Chairman-elect for 1986. He automatically assumes chairmanship of the Finance and Budget Committee.

I close my report with some personal observations. I have been an active member representative of CGS for 14 years. The past 15 months as Chairman of the Board, with the opportunity to work closely with our President, Jules LaPidus, and his fine staff, have been demanding, but totally pleasurable and most rewarding.

The reward rests in a growing sense of well being for CGS. In the parlance of today, CGS is on a high roll.

- Its mission to represent graduate education in the always volatile, often unpredictable, world of governmental USA—that mission is on the right path.
- Because of your recognition of the need for a strong voice for graduate education and your willingness to support that voice, the resources are at hand to carry out sound programs.
- Initial moves in the development of these programs have been made and involve a valuable and strong input from members actively participating in the several task forces.
- We are gathering new momentum as a member of the educational community at One Dupont Circle.
- I have never had greater confidence in the willingness, or the ability, of the fine staff to carry out what you and I as member representatives want for graduate education. It is a good feeling.
- Will you join me in a gesture of appreciation to Jules, to Tom, to Edna, Evelyn and Pat, for a job well done!

Thank you.

# PRESIDENT'S REPORT

**Jules B. LaPidus**

Nikos Kazantzakis in his modern sequel to Homer's *Odyssey* begins with the word "and" to indicate not just continuity with the past but a certain sense of timelessness about the present. It seems particularly appropriate at this 25th anniversary meeting with former presidents of CGS and former members of the board here with us today, to take much the same view. So let all of what I have just said be prologue. The President's Report starts now.

Furthermore, I will not review the past 25 years of graduate education here today except to say that it has been observed that the topics discussed at meetings of graduate deans are not so much timely as timeless. I don't find this particularly surprising. The issues—the quality of graduate education, the support of graduate education, the recruitment of students and faculty—will be a constant preoccupation of graduate deans. It is the conditions in society that affect those issues—the economy, national security, political realities and fantasies and the condition of scholarly inquiry—that change and require us to reexamine our world in light of those changes.

That is what we have gathered here to do and as we talk about minorities, international exchanges, taxes, data, research equipment, off-campus graduate education and other timeless topics, we will continue to focus our attention on understanding the issues and developing ways of effectively dealing with them.

I think it most appropriate in that context to talk about where CGS is today and about the new programs and services we intend to develop to better serve our members. During the past year as I have talked at regional meetings, at the workshops and at wherever else we chance to meet, about graduate education and the role of CGS, several things have been apparent. I have been delighted with the overall strength of your feeling and support for CGS. You feel that it is your organization—one that is supporting your interests. You are right in that. In every case your university holds membership in other national higher educational organizations and some of these are interested in graduate education as part of their range of interests; but there is no other organization totally devoted to graduate education. This is a major responsibility. As the CGS Board discussed the nature of our responsibilities as a national organization, it became obvious that in order to serve you well, to improve our services, legislative liaison, publications, meetings, consulting, information, we would have to increase our staff and make more extensive use of the talents of our members. In approving the dues increase, you have given us the means to do this. Specifically, on January 6, 1986, Peter Syverson, currently Project Director of the Doctorate Records Project at the National Research Council will join CGS as Director of Information Services. Many of you know Peter. He has been at NRC for approximately 10 years, the past five as Project Director. He has presented papers at our annual meetings in 1979, 1983 and 1984, and at summer workshops in 1984 and 1985. He has extensive experience with federal agencies that maintain national data bases and a long record of effective and cordial relationships with the graduate community. I believe he is ideally suited for the job and I am delighted he will be joining us.

His job is to develop the kind of national data base and information service that we need. The beginning phase of this project is the redesign of the CGS/GRE enrollment survey. As you know, this year we are sending out an abbreviated survey document. Even with that we hope we can get better data and use it more effectively than we have in the past. We hope to design the kind of data base that will facilitate more perceptive analysis of what is happening in graduate education. As in all cases, we will be dependent on your cooperation. The data base will go far beyond enrollment and degrees, however.

During the next few months you will be receiving two different survey documents in addition to the enrollment survey. One of them, to which I alluded last year, is intended to gather information about our members, their background and interests, the scope of their responsibilities and the nature of the graduate schools they administer. The second, now being developed by the Task Force on Computers in Graduate School Administration, will ask about the records management systems and computerized operations in your offices. These two surveys will provide a wealth of information about graduate schools and will allow us to better identify those institutions with similar characteristics so that we can customize some of the analyses and reporting that we do. This should provide more useful information to you.

We intend to introduce two new features into the *Communicator*. You will be the source; we will be the collector and disseminator. First, we want to establish a clearinghouse on institutional research concerning graduate education. Many graduate schools carry out institutional-based studies from time to time. These can range over a broad variety of topics, like recruitment, retention, time to degree, quality issues (e.g., the quality measures for dissertations, theses, examina-

New Board Chairman Lee B. Jones, *University of Nebraska*, at the podium, has said something to bring smiles to Robert E. Gordon, outgoing Board Chairman, *University of Notre Dame*, center, and CGS President Jules B. LaPidus.

tions), etc. Some of these studies may not be intended for other than administrative use within the institution, but many and perhaps most are documents that could be shared. We want to do two things: first, if you will send us a copy, we will maintain a kind of archival clearinghouse and catalogue the studies so that we can retrieve information. Second, we will publish on a continuing basis the titles, authors and brief descriptions of the studies in the *Communicator.* I think this will be a useful service. We will be able to answer the kinds of questions that start with . . . "Has anyone ever done a study of . . .?" You will see a listing of studies that may be of interest to you and you will have enough information to pursue whatever leads seem appropriate. Finally, as we begin to build our collection of these studies we may be able to make some connections that are not now being made.

The second *Communicator* project will be a "computer corner"—a feature that will make available short, informative pieces from you about hardware, software, information systems, records management, and related topics. The object here again is to provide a way of sharing information.

A number of other *Communicator* projects are being considered including a series of articles on student financial aid, and a continuing series on issues in the disciplines.

Now I want to report briefly on our task forces.

1. The Task Force on Women in Graduate Education has been collecting ideas about projects that could be carried out in graduate schools to better understand the current issues of importance to women in graduate education. The task force is in the process of analyzing responses to its questionnaire and developing methods for implementing some of the suggestions.
2. The Task Force on Data Needs is in the process of redesigning the CGS/GRE enrollment survey.
3. The Task Force on Computers in Graduate School Administration is designing a survey document to assess the state of computerization of graduate school information systems.
4. The Task Force on Publications has met and has suggested a long-term strategy for CGS publications. This involves defining the kinds of publications that CGS should be doing, including statements of general priciples, shorter documents dealing with technical subjects, white papers to focus attention on issues of current interest, and other related kinds of publications. In addition, we will be revising some of the CGS statements of principles currently in press, dropping some others, and instituting publication of some new ones.
5. The Task Force on International Aspects in Graduate Education has completed its report, recommending among other things that CGS investigate the development of some form of membership for organizations in other parts of the world that are involved with graduate education. This is being studied farther by our Membership Committee.

Other task forces are at work and will be presenting recommendations later in the year.

Finally, let me mention briefly what I see as major activities to be initiated in 1986 (over and above the ones just described). We will appoint a task force on the master's degree whose charge will be to develop a planning proposal for a comprehensive study of the master's degree in America. There is a long history of conferences, workshops, symposia and articles on the master's degree. Much of it has been descriptive, much has been proscriptive. There is a great need for a definitive study of the degree in today's terms and for some clearly stated principles related to quality in master's level education. There is also a need to examine the structure of higher education as it relates to the master's degree. Two aspects are of particular importance. First is the master's only institution representing approximately one-quarter of the CGS membership and providing a unique setting for master's level education. The second is the professionalization of the degree and particularly the role of professional schools (i.e., business, education, allied health, engineering, etc.) as parts of graduate education.

Second, we will continue to explore the use of the consultation service, particularly in terms of providing more consultation to you. Much of our consultation activities are related to specific academic program evaluation. We are best equipped, however, through our membership, to provide consultation on a wide variety of graduate school administrative issues, including governance, research administration, computerization of graduate school offices, development of graduate school information systems, financial aid, recruitment, minority issues, foreign student issues and a host of related concerns. Yet this is a part of our consultation service that is rarely used. We will be exploring the possibilities for making better known our capacity to provide useful and perceptive consultation to graduate deans and other university administrators.

There is no formal ending for this report. Like the graduate community we serve, CGS is a continuing force, pausing from time to time to make sure we know where we have come from and where we are, and then moving ahead with certainty about where we are going. I have tried to describe some of that today and will continue next year in San Antonio.

# THE COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

## Financial Report for Years Ended December 31, 1985 and 1984

We have engaged Grant Thornton, nationally recognized certified public accountants, 1850 M Street, N.W., Washington, D.C. 20036 to perform the annual audit of The Council of Graduate Schools in the United States. Summarized financial data is provided below. This recapitulation is not a complete presentation of the report of Grant Thornton and does not contain all the data and informative disclosures required by generally accepted accounting principles.

## BALANCE SHEETS

### ASSETS

| | 1985 | 1984 |
|---|---|---|
| Current assets | $512,225 | $465,610 |
| Fixed assets, less accumulated depreciation | 19,421 | 5,463 |
| Endowment fund investments | 18,012 | 18,012 |
| | $549,658 | $489,085 |

### LIABILITIES AND FUND BALANCES

| | | |
|---|---|---|
| Current liabilities | $122,572 | $112,105 |
| Fund balances | | |
| Unrestricted | | |
| General operating fund | 409,074 | 358,968 |
| Restricted | | |
| Endowment fund | 18,012 | 18,012 |
| | 427,086 | 376,980 |
| | $549,658 | $489,085 |

## STATEMENTS OF REVENUE, EXPENSES AND CHANGES IN FUND BALANCES

| | | |
|---|---|---|
| Revenue | $525,092 | $472,875 |
| Expenses | | |
| Personnel | 238,918 | 229,174 |
| Meetings and travel | 143,636 | 166,752 |
| Office expenses | 90,554 | 96,066 |
| Gustave O. Arlt Award expenses | 1,878 | 2,119 |
| | 474,986 | 494,111 |
| Excess (deficiency) of revenues over expenses | 50,106 | (21,236) |
| Fund balances at beginning of year | 376,980 | 398,216 |
| Fund balances at end of year | $427,086 | $376,980 |

# Luncheon

## PRESENTATION OF CGS/UMI DISTINGUISHED DISSERTATION AWARD

*Presiding:* Robert E. Gordon, *Vice President for Advanced Studies, University of Notre Dame*
*Presented by:* Keith S. Thomson, *Dean of the Graduate School, Yale University*

Displaying his award certificate, Timothy A. Johns is standing between Linda Mantel, *City College of the City University of New York*, a member of the selection committee, and Keith S. Thomson, *Yale University*, committee chairman. Looking on are John H. D'Arms, Dean of the Graduate School, *University of Michigan*, where Dr. Johns received his Ph.D., and on the right, Jules B. LaPidus, CGS.

The fifth annual CGS/University Microfilms International Distinguished Dissertation Award, this year in the field of biological sciences, was presented to Timothy A. Johns who received his Ph.D. from The University of Michigan in 1985 in botany, for his dissertation, *Chemical Ecology of the Aymara of Western Bolivia: Selection for Glycoalkaloids in the Solanum xajanhuiri Domestication Complex*. A certificate and check in the amount of $1,000 were presented to Dr. Johns by Dean Keith Thomson, Yale University, chairman of the award committee.

Dr. Johns presenting a summary of his award-winning work.

Typical of comments in support statements of his dissertation are the following:

"The multidisciplinary (as opposed to interdisciplinary) nature of the study is evident from the diverse methods employed: chemical analyses of the glycoalkaloids of potatoes, biosystematic analysis of the relationships between potato species using morphological and chemical traits, X-ray analysis of clays, measurements of the capacities of clays to bind glycoalkaloids, field observations of the natural history of wild and domestic cultivars of potatoes, studies of human taste perception and cultural practices using interviews and a taste test panel, and analysis of the folk taxonomy of the Aymara."

"The dissertation includes original studies of a wide variety of topics of interest not only to scientists, but to mankind in general."

Dr. Johns is now a postdoctoral fellow in the Department of Entomology and Parasitology at the University of California, Berkeley.

# Plenary Session V

## INTERNATIONAL ASPECTS OF GRADUATE EDUCATION

*Presiding:* Volker Weiss, *Vice President for Research and Graduate Affairs, Syracuse University*
*Speakers:* Victor Li, *President, East-West Center, University of Hawaii at Manoa*
Norman Peterson, *Executive Secretary, The Liaison Group for International Educational Exchange*

**Victor Li**

## THE PACIFIC AGE: PROSPECTS AND PROBLEMS

### The Pacific Age

The world has drastically changed in the past quarter century. Let me focus on one aspect, albeit an immensely important aspect, of that change: the Asia/Pacific region, particularly East and Southeast Asia.

In 1960, the year the East-West Center was founded, the United States had a balance of trade surplus with Japan; South Korea was regarded as one of the world's poorest countries, with little prospect for economic development; and the seeds for the region's economic explosion were just being sown. Cold War tensions between the United States and the People's Republic of China cast a pall on the international politics of Asia; Bangladesh was known as East Pakistan; and none of the island nations of the Pacific was fully independent. The concept of an Association of Southeast Asian Nations—ASEAN—had not yet come into being; indeed, the future partners were almost strangers to each other, and at times also adversaries.

In 25 years, the region has undergone a true transformation. Throughout this period, most of the countries of East and Southeast Asia have been growing at rates unmatched by any other region in the world. The resurgence of Japan from the destruction of World War II to become a world industrial power is well known. But in addition, for much of the 1970s, while the United States and Europe were moving along at sluggish growth rates of 3% or less, the economies of South Korea, Hong Kong, Taiwan and Singapore were expanding at nearly 10%, introducing a new term into the economic lexicon—Newly Industrialized Countries, or NICs. Four other countries belonging to ASEAN—Indonesia, Malaysia, the Philippines

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I gratefully acknowledge the insights and information provided for this article by Dr. Seiji Naya, Director of the Resource Systems Institute of the East-West Center and former chief economist at the Asian Development Bank.

(despite its present problems) and Thailand were not far behind and are likely to be the next generation of NICs. After two decades of relatively slow growth, China has changed its economic policies and, in recent years, it too has achieved very high rates of growth.

In 1960, East and Southeast Asia produced 11% of the gross world product, compared to 36% for North America and 23% for Western Europe. Twenty years later, the East and Southeast Asian share had grown to 19%. By the end of this century, barring unforeseen developments, that figure will increase to 21%, and will be approximately equal to North America's and Western Europe's share of gross world product.

The most striking factor in the growth of Asia and the Pacific has been the heavy reliance on export-oriented policies. Exports were encouraged through favorable tax and credit treatment, sales promotion, facilitation of capital and technology transfer, sending of students and others abroad, and realistic control of exchange rate policies. These actions in turn integrated the developing Asian countries more fully into the world economy. In fact, their degree of openness to external trade is very high. The average export-to-GNP ratio of the NICs is more than 50% and the other ASEAN countries is 30%-35%. (By way of comparison, the ratio for the United States is about 6% and for Japan about 13%.) Foreign trade, especially with Pacific basin countries, has become a vital part of their economies.

In order to support their high rates of growth, the countries of East and Southeast Asia have had very substantial rates of gross domestic investment, usually running to about 30% of GDP each year. The largest proportion of this investment—about 80%—comes from domestic savings. Since 1960, the rates of savings in these countries also have grown substantially, generally ranging to 20%-30% of GDP. By way of comparison, savings in the U.S. is only about 5%.

The NICs and ASEAN countries carry substantial foreign debt, but with the exception of the Philippines, do not have serious debt problems. They have tended to place greater reliance on long-term rather than short-term investments, and also to reduce borrowings during recessions. In addition, the effective use of foreign capital has aided economic development, and continued growth of exports has provided the needed foreign exchange for debt servicing.

In political terms, despite the turmoil in Indochina and the current problems in the Philippines, the Asia/Pacific region has been quite stable. This is certainly true in comparison with the situations in the Middle East, Latin America and Africa. Although tensions sometimes mount, there has not been armed conflict across the 38th Parallel or the Taiwan Strait for many years. Nor are there large-scale insurgency or revolutionary movements, except perhaps in the Philippines. The emergence of new development-oriented policies in China will contribute substantially to continued stability and growth in the region.

In the future, a number of important issues must be dealt with: the Indochina conflict; Korea; political succession, not just in the Philippines but also elsewhere; the Taiwan question; and the longer term regional impact, both political and economic, of an increasingly strong China. But these issues can be managed, if not resolved. Indeed, progress is already being made in some areas.

Looking at all these factors, many persons have come to speak of a coming "Pacific Age" or "Era of the Pacific," where many of the key global developments, especially on economic matters, will shift from the Atlantic to the Pacific, and from North America and Europe to Asia.

I believe in the Pacific Age. I also realize that the use of such a term, while dramatic, may lead to overemphasis and misunderstanding. Thus, although we are seeing a shift in the *relative* balance of economic activities towards the Pacific, Europe and the Middle East will continue to be extremely important. The problems of other developing regions such as Latin America and Africa also will continue to require a great deal of attention. Moreover, while the economic strength of the Pacific will increase, the principal strategic forces and areas of contention will lie outside that region. The Pacific Age, then, is not a turning away from traditional emphases such as Europe, but rather the redressing of a prior imbalance in which the weight of the Pacific was considerably undervalued.

I believe these trends will continue to grow. The economies of many of the Pacific basin nations, including the United States, Australia and New Zealand, are now fundamentally intertwined. Thus, considerably more than half of the exports of these nations are to other nations of the Pacific. While political and cultural differences remain, economic interdependence now affects national lifelines, and not just marginal matters.

In the long run, the nations of the Pacific can run together, or limp together, or stumble together, but they cannot readily part company. On the positive side, the joining of the region's resources will yield a whole that is greater than the sum of its parts, with resulting larger shares for all.

## Several Questions for the Future

### *The NICs and ASEAN*

The economic strategies of the East and Southeast Asian countries were developed around the 1960s at a time of liberal attitudes toward trade. In addition, the developed countries were growing at an adequate rate, and were willing to extend special assistance to the smaller and weaker developing countries.

The international atmosphere of today is quite different. Two oil shocks, the world-wide recessions of recent years, the debt crisis and similar concerns have led to varying degrees of export pessimism and "aid fatigue," as well as a sharp rise in protectionist sentiment. Moreover, as the developing countries of Asia become increasingly wealthy and competitive, arguments advanced by them about the need to protect "infant industries" become much less compelling.

At present, most of the criticism of the Western countries is directed against Japan for the barriers it maintains against foreign imports and, to a lesser extent, for its aggressive export activities. But the NICs and the other ASEAN countries are not going to escape unscathed in this struggle. For one thing, almost all the same criticisms can be made against these countries: protection of domestic industries, exclusion of foreign competition, subsidizing of exports, etc.

More fundamentally, having based their growth on outward looking export-oriented strategies, the NICs and the other ASEAN countries are now extremely sensitive—and vulnerable—to international economic and political developments.

Consider what happens if the trade dispute between the United States and Japan continues to escalate and the international trading system is disrupted. For the United States where trade is about 18% of the GNP, such a development would be troublesome and painful. Japan, whose trade is about 31% of the GNP, would suffer more damage.

But for Singapore where trade in goods and services is 300% of GNP, or Korea, Taiwan and Malaysia where such trade is about 100% of GNP, or even the other Southeast Asian countries where the comparable ratio is about 50%, trade issues are not marginal matters producing greater or lesser prosperity. Even a moderate disruption of the trade system can affect the very existence of a government.

This is not to say that NICs and other ASEAN countries do not need to make some changes. Yet even as these countries make adjustments, it is vitally important that the two giants in the arena—the United States and Japan—be extremely careful not to allow their bilateral struggles to spill over to all of Asia, upsetting economic efforts of several decades and ultimately undermining the region's praised political stability.

### *United States and Japan*

Let me discuss some issues concerning United States–Japan trade. Both sides recognize that a $50 billion deficit is undesirable. How to solve this problem is much more difficult. I am concerned that none of the proposed solutions looks very hopeful.

The United States has urged Japan to reduce various tariff and non-tariff barriers to imports, and Japan has been responding positively, although slowly. The United States also is seeking "open access" to domestic Japanese markets, hoping that in this way sales of American products will greatly increase.

Certainly, "open access" everywhere is a desirable goal and is a logical extension of the principles of free trade, reciprocity and national treatment. At the same time, we should not expect too much from "open access."

First, we all recognize that Japan's tariff rates and quota restrictions already are low overall when compared to those of other countries. In any case, further reductions will not substantially change the current situation. One U.S. Department of Commerce estimate suggests, for example, that if *all* barriers to American exports were removed—an unlikely scenario—American sales to Japan might increase by $10–$12 billion a year—still leaving a huge deficit.

Put another way, a large proportion of the barriers American sellers face is cultural, rather than legal or political. "Open access" allows Americans to confront the barriers, but does not remove the barriers. For the latter to happen, from the American side, we must learn much more about Japanese society and culture, in the same way that so many Japanese businessmen and students have learned about the United States.

I am sorry to say that I do not believe such an educational process is being adequately implemented in the United States. For example, in 1983 only 16,127 American college students were studying Japanese, and most of them for only two years or less. At that rate, we will never reach the point where meetings and conferences can be held in Japanese or where an entire cadre of American businessmen and government officials can deal comfortably and knowledgeably with Japan.

I think that the opening of access to Japan without a concomitant broad long-term educational program in the United States about Japan will not help to reduce the deficit significantly. Within a short time will come new recriminations on how Japan is still withholding its markets.

At the same time, Japan simply must make some changes, and do so quickly. Patience in the United States, Europe and other parts of Asia is wearing quite thin. Despite its large population and huge economy, Japan is only a limited market for manufactured goods and processed products from other countries. For example, in 1981 the United States purchased 32% of all manufactured exports of the NICs and 28% of those from ASEAN countries. Japan took slightly less than 7% from each. That is, the NICs and ASEAN countries were exporting more than four times the amount of manufactured goods to the U.S. than to Japan. Whatever the causes, it is clear that a serious problem exists with respect to Japanese imports of foreign goods.

Obviously, efforts should continue to be made to liberalize Japanese import practices. But a broader solution to this problem may lie in a more fruitful and hopeful direction.

As has often been pointed out, a two-pronged approach is needed. In the United States, we simply must reduce the budget deficit through significant cuts in spending or increases in taxes, or both. This will reduce interest rates and strengthen the longer-term effort to lower dollar-yen exchange rates.

At the same time, Japan might stimulate economic demand by substantially increasing investment in domestic social infrastructure in areas such as housing which has been relatively neglected. This investment will increase the demand for foreign imported products needed to build and sustain the infrastructure. Admittedly, this strategy has a definite inflationary risk, but I believe the risk is manageable in view of Japan's high savings rate. And in any case, this approach is likely to yield better results than either country just pointing the finger at each other, and also better than the United States simply seeking a lowering of tariff and quota barriers which already are quite low, or demanding "open access" to markets the cultural barriers to which we cannot readily penetrate. This approach also protects the well-being of the NICs and the other ASEAN countries, and in the process, assures continued political stability in the region.

### *China*

Allow me to turn to some questions concerning China. As we all know, dramatic changes in economic and political policies have been instituted in recent years. Five years ago, Chinese leaders set the target of quadrupling personal income by the year 2000 to about $1,000 per capita in today s dollars. Can this ambitious goal be attained?

When the reforms were first introduced in the late 1970s, some observers were skeptical that the changes could be readily implemented. For one thing, the political pendulum has swung several times from left to right and back again over the past three decades. Undoubtedly, there will continue to be a pull to the left in China for years to come. In addition, some wondered whether the effort to make massive changes in the economic system in a short time would overtax that society's management capability, leading to, among other things, serious inflation, distribution bottlenecks, overcapitalization, etc.

In the past several years, it has become increasingly difficult to remain very skeptical about the reforms. The economy has been growing at an overall rate which will produce a quadrupling of 1980 income well before the year 2000. The introduction of much greater material incentives has increased production in both agriculture and industry. Management problems have arisen, especially in the industrial and commercial sectors, but do not appear to be insurmountable. Perhaps more important, an orderly transition of power is well under way to a young and able group of leaders holding values similar to those of Deng Xiaoping.

Nevertheless, the initial concerns mentioned above about the long-term viability of the present economic policies are still present. The process of solving these problems has begun, but is by no means completed. In addition, even if full political support is sustained and management difficulties are overcome, some other basic obstacles must be dealt with. Let me just simply raise several questions.

China is encountering a serious shortage of water for agricultural and industrial use and for human consumption, particularly in northern and central regions. Overcoming this problem will require massive waterworks projects to control the Yellow River and other rivers or even to turn northward the waters of the Yangtse. These efforts would take several decades and many billions of dollars of capital. How will this physical limitation affect future economic growth and where will the needed capital investment come from?

In addition to the issue of water, a number of other questions arise about the future. Can inflation be kept under control? Can enough additional capital be generated for the needed investments in infrastructure not just for water projects but also for transportation and energy? If growth continues, what will be the economic impact of China on the region? What are the possibilities, trying to detach ourselves from our own preferences, that there will be a swing to the left politically, whatever the magnitude?

### *The United States and the Pacific*

Finally, let me make some general comments about the United States and the Pacific. The United States had and has major psychological or cultural barriers to overcome in developing its relations with Asia. Being a large continental country, over the years the United States had basically looked inward in seeking to solve its problems and meet its needs. When it did turn outward, it generally looked in the direction of Europe—a perfectly understandable fact for a society whose cultural and ethnic roots are essentially European. With that kind of national orientation, Asia and the Pacific were distant places, both physically, and perhaps more important, distant psychologically. These distances were further aggravated by differences in language and culture that made communication more difficult.

In recent years, a great deal has obviously changed. Asia and the Pacific have become immensely important to the economy of the United States. Trade with this region reached $175 billion in 1984, readily exceeding comparable trade with Europe. Capital flow across the Pacific is more than ten times that figure. American investments in the region [excluding Australia] total $13 billion, and there is over $20 billion in Asian investments in the United States, mostly from Japan. All these trends are likely to accelerate in coming years.

On political matters, the United States and the Asian countries sometimes disagree. But taken as a whole, the degree of cooperation and mutual support is extraordinarily high among ASEAN, the NICs, Japan and the United States. Similarities in values and national interests make this group of nations a fundamental anchor for the future stability and growth of the world. Even with China, where major differences remain, a significant degree of cooperation also is developing.

Far more national attention in the United States is being turned toward Asia and the Pacific. Senior American government officials now frequently visit the region. Corporate activity in Asia has increased even more dramatically. Academic studies have expanded. Newspaper and other media coverage of Asian news has improved.

Let me return to 1960 for a moment. Even though at the time the Pacific Age was at most only a glimmer in the mind's eye, there were men and women of vision who saw the great importance of establishing a strong and enduring link between the United States and Asia. In the United States, Lyndon Johnson in Congress and John Burns in Hawaii led the effort to establish the East-West Center. They foresaw that the Center, located in Hawaii in the middle of the Pacific, would become a meeting ground for the peoples of this vast area. Cultural and technical interchange through educational programs, cooperative research, and dialogue would contribute to the development of Asian and Pacific countries and to the strengthening of mutually beneficial ties between the United States and nations of the region.

Slowly but inexorably, we would increase our understanding of each other and build up our national capacities to deal with each other.

That some 30,000 persons from more than 40 countries have participated in East-West Center programs attests to the accuracy of this vision. These persons, augmented manyfold by other Asians and Americans who have made the effort to learn about each other, are the men and women of the new Pacific. Through them, the many diverse groups in the region could communicate with each other across cultural barriers and national boundaries, come to accept differences where diversity is desirable, and deal with disagreements when a common position must be found.

Having said all that, it is eminently clear to me that we still have a very long way to go before an adequate degree of mutual understanding is truly reached. Let me speak here only of the United States, but again I suspect the same can be said about each of the countries of Europe and Asia.

In the United States, our national capacity to deal with Asia, while improving, remains quite low. Let me cite the example of just one key area: knowledge of Asian languages. I am told that there are more people studying Japanese in Australia—a country of only 16 million population—than in the United States. Until 1980, interpreters for discussions between American Presidents and their Chinese counterparts were provided by the Chinese side, apparently because we had none. If that is the situation for Japanese and Chinese, two languages the study of which the federal government supported, think how much worse the situation is for Thai or Indonesian or Urdu.

Is it any wonder then, that the United States has difficulty penetrating foreign markets? We do not speak the most important language of all for this purpose, the language of the customer.

Our depth of knowledge about the region is also inadequate. *Theory Z* and *Japan as No. 1* are fine books, but they really do not tell enough about what the cultural factors are contributing to the remarkable growth of Japan. We know almost nothing about the religious factors influencing developments in the giant Islamic arc swinging from Pakistan through Bangladesh, Malaysia, and Indonesia. Our newspapers and television stations carry little Asian news. Primary and secondary school texts hardly refer to the region. Occupants of high government offices and corporate boardrooms tend to be unfamiliar with the region.

Thus, while the United States does have some numbers of highly able men and women knowledgeable about the new Pacific, on the whole, the knowledge possessed by these persons has not moved out very far into the larger society. There are excellent pockets of expertise on Asia, but there still is a considerable lack of understanding in many major sectors, including policymaking sectors.

This is a situation which must be corrected, both in the United States and in Europe. There are no quick solutions. What is needed is a long-term commitment to an educational process which will finally have the West of Europe and the United States meet the East of Asia and the Pacific.

**Norman Peterson**

In the year 1158 A.D. Frederick the First, Emperor of the Holy Roman Empire, issued an interesting decree about international educational exchange. It read, in part:

> After thorough consideration of the case with our bishops, abbots, princes, dukes, judges, and other noblemen of our holy court, we decree this benefit of our grace, that everyone who because of his studies wanders abroad, students and professors of the most divine and holy laws, shall . . . come in security to places where the studies are exercised and live there in peace . . . . Who of them is not to be pitied, as they for their love of science long exile and deprive themselves, being already poor of riches, expose their lives to many dangers and sustain corporal injuries by often very villainous people . . .

It is, I admit, an unlikely place to begin a consideration of the state of international exchanges in American graduate education in 1985.

I have shared it with you because I think it suggests three crucial points:

- first, international exchanges have been essential to the education of scholars from the very beginnings of the modern university;
- second, international exchanges must be constantly nurtured and protected if they are to succeed; and
- third, the educational community is in a long-term partnership with government to ensure that channels for international exchanges remain open.

Although there are, as Frederick was aware, "many dangers" and "very villainous people" out there building barriers to international exchanges, I do not want to begin with them. All too often, we must devote all our attention to the threats and problems which besiege us.

Today, as we celebrate the 25th anniversary of the Council of Graduate Schools, we can and should celebrate a tremendous flowering of international participation in American graduate education. This blossoming of the international dimension in our graduate schools is an achievement for which CGS and its members can be justly proud. Consider some of the facts regarding the foreign student in graduate education.

## Trends in Foreign Student Enrollments

In 1960, as the foundations of CGS were being laid, there were 20,000 foreign students in U.S. graduate programs. Last year, there were nearly 123,000. Over these twenty-five years, foreign graduate enrollments have increased more than six-fold.

Shorter term trends are also encouraging and demonstrate an amazing resilience in the foreign demand for graduate study. Since 1980, the number of foreign students enrolled in graduate schools increased by 22,000, and from 1983 to 1984 foreign enrollments increased by 8,500 or 7.8 percent.

In spite of a revolution in Iran which has choked the flow of students from what had been by far the leading country of origin of foreign students; in spite of the drastic devaluation of most foreign currencies in relation to the dollar which has multiplied the cost of U.S. education; in spite of the world oil glut which has devastated the economies of major consumers of U.S. education such as Nigeria, Venezuela, and other OPEC nations—in spite of all these factors, foreign M.A. and Ph.D. degree-seekers have continued to grow. (It should be noted, however, that this growth has considerably leveled off from the steep increases of the 1970s).

The 1980s have also seen the reversal of the persistent trend through the '70s toward undergraduate education among foreign students. While graduate enrollments constituted more than 48 percent of all foreign students in 1970, this percentage had fallen to less than 32 percent by 1980. Consistent gains since then—largely due to the great surge in the number of students from Asian nations, a large proportion of whom come for graduate study—brought the percentage of graduate students back up to almost 36 percent in 1984.

The importance of the foreign graduate student in our institutions is profound. A recent University of Minnesota labor market study indicates that in 1980 at least 25,000 faculty and staff positions on U.S. campuses were maintained by foreign graduate enrollments. If we extrapolate from this study based on current graduate student numbers, at least 30,000 positions are currently maintained by foreign students in graduate programs on U.S. campuses.

Graduate students from abroad bring at least one billion dollars per year of foreign income into U.S. institutions and surrounding communities, making it an export industry of considerable importance to the U.S. balance of trade.

Most importantly, however, foreign students bring a crucial international educational perspective to our campuses. Columbia's President, Michael Sovern, has perhaps best articulated this in his 1983 report to Columbia's Board of Trustees when he wrote:

> We aspire to share the heritages of civilization, to extend the reaches of knowledge and understanding across all political borders, to expose some of the world's best minds, young and old to each other. . . . we believe that most foreign students profit greatly from a Columbia education. We *know* that Columbia gains much from them in broadened perspectives and enriched insights.

Even some of the so-called problems of international exchange—the very high proportion of foreign students in some engineering and other graduate programs and the notorious problem of the unintelligible foreign teaching assistant—are not really "international exchange problems" as much as they are "not very good international solutions to very substantial domestic problems."

## Directions in Federal Policy

Perhaps a more remarkable story of success is found in looking at the federal government's recent involvement in relation to graduate international educational exchange. This was illustrated last month when President Reagan made student and scholar exchanges a centerpiece of his summit talks with Soviet Premier Gorbachev and a new accord was signed covering educational exchanges between the U.S. and the U.S.S.R.

But more substantially than this, under the shadow of the many crises the higher educational community has weathered in Washington during the Reagan years, a genuine renaissance has taken place in federal international exchange programs.

Ironically, this renaissance was engendered itself by a crisis. In 1981, as you may recall, the director of the U.S. Information Agency (then the U.S. International Communication Agency), which administers the Fulbright Program and other major U.S. government exchange programs, decided to take almost all of the 13 percent budget cut proposed for the entire agency from exchange activities. These plans would have left the Fulbright Program a smoldering ruin.

A remarkable tidal wave of support for the Fulbright Program was generated in response to this threat from around the nation, from abroad, and, most importantly, from Capitol Hill. The agency reversed itself and restored the funding for educational exchanges.

Seizing this opportunity, Senator Claiborne Pell of Rhode Island, the ranking minority member of the Senate Foreign Relations Committee, proposed to his colleagues on the committee that restoration was not good enough. The exchange programs had been allowed to badly deteriorate through years of slow funding erosion. Pell authorized legislation, now known as the "Pell Amendment", which directed U.S.I.A. to double its funding for educational exchange activities from fiscal year 1982 levels by fiscal year 1986.

Although some were skeptical about the value of Pell's initiative, he won the support of appropriations committee members who approved earmarking the dollars needed to double exchanges in U.S.I.A.'s funding bills. Although the administration initially resisted the amendment and sought its repeal, USIA finally (for reasons we will explore below) endorsed it. In the last two budgets U.S.I.A. has sought from Congress the funding to complete this rebuilding program for the Fulbrights.

As a result, where there had been 72 million dollars available for U.S.I.A. exchange programs in 1982, there are $146 million this year. This renewal of federal support has enabled a rebirth of the Fulbright Junior Scholar Program. The number of awards available to talented graduate students to go abroad and come to the U.S. through the Fulbright Program has risen dramatically. Where there had been 475 awards to U.S. graduate students in 1983, there were 550 in 1984. Where there had been 2280 awards for foreign graduates to come to U.S. institutions in 1983, there were 2455 in 1984.

# CONCURRENT SESSIONS

## GRADUATE EDUCATION FOR TEACHERS (REPORT OF WINGSPREAD CONFERENCE SPONSORED BY CGS AND AACTE)

## OFF-CAMPUS GRADUATE EDUCATION

ANAHEIM
Marriott Hotel

## DATA NEEDS IN GRADUATE EDUCATION

ANAHEIM
Marriott Hotel

## STATE AND REGIONAL INITIATIVES IN GRADUATE EDUCATION AND RESEARCH

## TAX LEGISLATION 1985: REFORM, PROBLEMS AND POSSIBILITIES

## PREPARATION OF THE PROFESSORIATE: ROLE OF GRADUATE SCHOOL

1986 will mark the fortieth anniversary of the Fulbright Program and (unless the impact of the newly enacted Gramm-Rudman legislation intervenes) there may well be similar increases in the number of awards to celebrate.

A similar renaissance has taken place at the Agency for International Development, the other federal agency heavily involved in educating foreign graduate students. A.I.D. has more than doubled its participant training program in the eighties and is currently attempting to increase the number of foreign students under its sponsorship from the 10,000 it sponsored in 1984 to 15,000 by the end of this year.

How can this trend have happened when so many federal education programs have been threatened with extinction? The answer lies in the fact that international exchanges in general—and the training of foreign students in the U.S. in particular—have become increasingly important foreign policy matters during the last decade. There are two fundamental reasons for this new foreign affairs emphasis.

The first is demand. Graduate institutions in the U.S. have created a state-of-the-art product that is in high demand around the world. When Secretary Shultz returned from a meeting of Asian nations in 1984, he commissioned a study of ways government could promote increased exchanges because the issue was so high on the agendas of his fellow ministers.

U.S. institutions do not offer the least expensive advanced training available, compared with the cost of attending institutions in France, or Germany, or the Soviet Union. Yet, students continue to choose the U.S. programs by more than three to one over the closest competing host country, France.

The second factor is found in the competition among nations for the *opportunity* of educating future leaders of other nations.

In response to the growing number of students from abroad flocking to American institutions, the Soviet Union began in the '70s a major new emphasis on educating students from the developing world. In 1972, we believe about 24,000 students were enrolled in programs in the Soviet Union and Eastern Europe. By 1982, there were probably 84,000. The Soviet Bloc had, in other words, quadrupled foreign student enrollments in ten years.

This trend, in turn, has not gone unnoticed in Washington. Thus, the Pell Amendment's findings note that:

> The Congress finds that . . . during the '70s while U.S. [government scholarship] programs have declined dramatically, Soviet exchange-of-person activities have increased steadily . . . . As a consequence . . . [Soviet programs provide it] an important means of spreading its world-wide influence.

The Soviet scholarship push also fostered the other very significant recent policy development, the Kissinger Commission's recommendation in January of 1984 to bring 10,000 Central American students to the U.S.

The commission's recommendation was picked up quickly and has had an enduring impact on congressional thinking. Just this summer Congress acted, on the initiative of Senator Pete Domenici, to set aside 44 million dollars of U.S.I.A's exchange funds exclusively for Latin America. Just before this, the Senate Appropriations Committee, also at Domenici's suggestion, added funds for 90 second-year programs for Central American graduate students and provided funds for full two-year programs for 108 more.

These major gains may well fall victim, at least in part, to the retrenchment process which the Gramm-Rudman bill has set in motion.

Nonetheless, there is a clear convergence of interests between the Congress, the administration, and the educational community regarding the importance of international exchange activities. It is important to remember that this is a convergence of interests, and not an identity of interest. Our interests in exchanges as educators are not the same as those of A.I.D. or U.S.I.A. or the House Committee on Foreign Affairs. But a very important partnership has been renewed regarding exchange activities which is of tremendous importance.

Although the last twenty-five years have seen great advances, there are today, as there were in 1158, dangers, problems, and villains to deal with. The problems have changed over the centuries. We do not, thankfully, often need concern ourselves about students "sustaining corporal injuries by often very villainous people." We need, nonetheless, to protect international exchanges from the real threats they do encounter today. I would like to turn now to consider some of these areas of concern.

## Threats to Technology Transfer

The first, and perhaps in the long run the most dangerous of these threats, is a trend toward preventing technology transfer. There are forces at work in the United States today which are seeking to keep American technology and knowledge at home—in effect, to barricade America within a high-tech Alamo.

This trend recently surfaced in efforts to prevent the Agency for International Development from carrying out activities which would enable developing nations to reduce their dependence on U.S. agriculture. But these forces have had other recent manifestations. In 1982 many institutions received letters from the Department of State asking them to carefully monitor and report on the research activities of Chinese scholars. In 1983 nuclear and aviation related disciplines were closed to all students from Libya. Bowing to pressure, some institutions have even closed some courses altogether to foreign students. Most recently, new restrictions on access of Soviet scholars to campuses having super computers have been seriously discussed.

There is manifest here an intellectual isolationism which is very dangerous to the openness of exchange channels. To counteract it, Congress included language in the major export bill it passed this session ". . .sustaining the ability of scientists. . .to communicate. . .by means of publication, teaching . . .and other forms of scholarly exchange." But technological protectionism is a major long-term factor with which we must deal and the battle for the openness of our academic links with other nations is far from over. To counteract this threat I believe we must forge a careful line of argument which protects the openness of international scholar access.

## The Brain Drain

The second issue which must concern us is the very complex problem of the so-called "brain-drain." Here the questions greatly outnumber the answers. More than anything else, we simply need to know more than we presently do about the return of talent from educational programs to developing nations.

The issue has been given urgency by inclusion of a home country residency requirement in the much-debated immigration reform legislation Congress has struggled over in recent sessions.

Newly available immigration service data, however, suggests a much smaller problem than Senator Simpson and Representative Mazzoli, cosponsors of the return proposal, allege. Last year, only 18,000 foreign students, out of the nearly 339,000 graduates and undergraduates in the U.S., changed their immigration status to permanent resident, indicating that only five percent of foreign students remain legally in the U.S. But this figure requires interpretation since most of the students in the 339,000 annual enrollment pool are in the U.S. for two or more years and some additional students first become temporary workers and then change to permanent residence. Taking these factors into account, my estimate is that between twelve and sixteen percent of our foreign master's and doctoral students remain legally in the U.S.

Even if the demographics of the so-called brain drain were clearly understood, the underlying issues would still be complex.

Our institutions clearly rely upon foreign graduates in computer science, engineering, and other disciplines to fulfill crucial research and teaching roles. These foreign faculty members contribute to our ability to continue to teach large numbers of foreign students, and continued access to U.S. education is certainly in the long-term interests of developing nations. The most gifted of our foreign graduates ought to be allowed to continue their work at whatever institution setting in whatever nation can best support their research. World class scholars deserve world class facilities and all nations will in the long run gain the most by the fullest use of their potential.

On the other hand, every master's degree candidate on an Agency for International Development scholarship is not a budding Einstein, and graduate faculties are no doubt encouraging too many such students to stay on for a doctorate when their skills are sorely needed at home.

In addition, there are surely more creative and positive ways we could approach the return of talent issue. Graduate programs, together with professional associations, government agencies and their overseas missions, could do more to help students cross the bridge from U.S. graduate school to professional work at home. Ongoing channels of communication between institutions and their foreign graduates could be helping them to remain up to date in their fields in isolated areas abroad. More attention could be devoted to building the special skills foreign students will need to be successful in their home countries. Considering the numbers of foreign graduates in our programs, these and other approaches would serve the best interests of graduate education as well as developing nations.

### Foreign Students and Intelligence Gathering

A more sensitive issue of long-term importance concerns the relationship of foreign students to U.S. and other nations' intelligence activities. Although the extent of these activities is difficult to assess, surveillance of foreign students by U.S. intelligence agencies is certainly a reality. A recent article in the *Chronicle of Higher Education* by former C.I.A. Director Stansfield Turner indicates that covert recruitment of foreign students by faculty members and others is a fairly widespread practice. Foreign governments' intelligence agents are, no doubt, also on campus watching foreign students. International exchange linkages are fragile and easily undermined. A growing spiral of intelligence activities relating to educational exchanges could be very damaging, and the educational community needs to be mindful of this potential problem.

### Other Issues

Two final issues deserve careful monitoring by the educational community. I will only mention them here without going into the detailed discussion they merit.

The first issue concerns recruitment of foreign students abroad, particularly practices of so-called 'third party' recruiters—i.e. individuals who recruit students on a contract basis for one or more institutions. Recruitment efforts must be approached with the utmost care and with the highest standards of institutional conduct. This has not always been the case. When recruiters have deceived students about educational programs or institutions, and when they have used students' keen interest in a U.S. education to their own economic advantage, all of U.S. higher education has suffered as a result. We need to ensure that the reputation of U.S. institutions remains unquestionable by making sure that these abuses do not occur.

Then there is the problem of the American 'diploma mill'. Availability of mail order degrees and basement graduate schools giving out American degrees abroad seems to be a growing problem. Here again, the reputation of U.S. higher education suffers to the extent that these practices continue and expand.

### Conclusion

There is, indeed, much to celebrate as we survey the tremendous development which has taken place in the international dimensions of American graduate education in the last two and one half decades. Enrollment patterns clearly indicate that U.S. graduate education is viewed as the program of choice by students around the world. Equally encouraging is the convergence of interest between graduate education and American foreign policy, and the greatly strengthened partnership with government that has recently developed as a result of it.

As Frederick's decree with which I began reminds us, however, international exchanges of students and scholars are fragile enterprises threatened by many risks and dangers. The villains have changed since Frederick issued his edict in 1158, but they are with us today as they were in the Holy Roman Empire. Exchange programs require careful nurturing if they are to continue to thrive and develop. It is up to you, me, and others in the education community to see to it that international exchange programs are protected and that they continue to flourish as we look toward CGS' fiftieth anniversary.

# Concurrent Sessions

## 5. STATE AND REGIONAL INITIATIVES IN GRADUATE EDUCATION AND RESEARCH

*Presiding:* Aims C. McGuinness,
*Assistant Executive Director for Higher Education,*
*Education Commission of the States*
*Speakers:* William E. Davis, *Chancellor, Oregon System of Higher Education*
Ann Spruill, *Director of Special Projects, The Spangler Group,*
*Boston, Massachusetts*

**William E. Davis**

### OREGON'S UP-FRONT INVESTMENT

Like other parts of the country, Oregon's economy is in transition. It is changing from an economy that is highly dependent upon natural resources to one that is more diversified. In both natural resource industries and new high-technology industries, science and technical training are becoming increasingly important. In such an economy, higher education becomes an essential producer of the ideas and the skilled workers needed to support new science-related industry. Put another way, higher education is supplementing Oregon's fields and forests and ocean as the producer of the essential resource for our future economy.

We in the Oregon state institutions of higher learning believe that more than ever before, university research plays a vital role in our state's economy. Annually, our universities attract over $125 million in gifts, grants, and contracts that are spent employing people and purchasing goods and services in local economies. Research conducted at the agricultural experiment stations has resulted in large increases in the productivity and value of Oregon agriculture. Forest products research has also increased the growth of Oregon's forests. Marine science research has enhanced the productivity of our coastal industries. Basic and applied research in electrical engineering and robotics seeks to sustain our growing microelectronics industries. Recent developments in genetic engineering and the biological sciences and the application of new technology to human health care have the potential of producing many new jobs in this state and across the country. And the products of this research enable our colleges and universities to offer public services that improve life in Oregon.

But it isn't enough that just we in the universities and colleges believe all of these good things. To implement our programs, we need the understanding as well as the support of the people of the state. We need a strong partnership between higher education, state government, and business and industry to identify the desired goals, organize the resources, and deliver the programs.

To get this understanding and support, in 1982–83, the Oregon State System of Higher Education set out to develop a strategic plan to improve access to our colleges and universities, to upgrade the quality of the academic and research programs, to strengthen programs that would contribute to the economic development of the state, and to improve the efficiency of managing our institutions.

The plan went through several drafts before it was adopted by the State Board of Higher Education in May, 1983. Along the way, however, it provided a vehicle for higher education officials to go to all of the major communities of the state for public hearings and feedback.

Some elements of the plan were implemented by the fall of '83, including—more rigorous entrance requirements, elimination of remedial courses, a tuition freeze for students, distinguished faculty stipends, schedules for deferred maintenance and replacement of equipment, fine-tuning of institutional missions, reduction of unnecessary duplication, and a modest up-front investment in economic development programs in selected graduate fields.

Building on this base, we began gearing up for a big push in the 1985 legislature. Heading the charge was our Governor, Victor Atiyeh, who publicly announced he didn't want to spend more money just to do the same things in higher education. He wanted a program that would make a difference.

With his backing and leadership, we targeted a series of objectives, including:

- Substantial salary increases for faculty with particular emphasis on impacted fields, i.e., engineering, computer sciences, business; continuation of the distinguished faculty stipends; and state-endowed chairs.
- Expanded schedules for deferred maintenance and equipment replacement.
- New equipment for the sciences, computer sciences, health sciences, and engineering.
- Enhancement of strong graduate and research programs in agriculture, forestry, and marine science at Oregon State University, and in the health sciences at the Oregon Health Science University.
- Centers of excellence on the graduate level in cellular biology at the University of Oregon, electrical engineering and computer sciences at Oregon State University, and engineering and international trade and commerce at Portland State University.
- New facilities to house the above programs at the University of Oregon, Oregon State University, Portland State University, plus an engineering classroom and laboratory building at Oregon Institute of Technology—all to be funded from proceeds from the newly established Oregon lottery.

Also included on the agenda was a request for funds to establish the Oregon Center for Advanced Technology Education in Beaverton, the hub of the electronics industry on the outskirts of Portland. This would create an administrative framework for cooperative efforts in state-of-the-art instruction and research through a partnership of public and private institutions and the high-tech industries. The plan called for the governor to appoint a Commission on Technical Education composed of the chief executive officers of the leading electrical engineering corporations in Oregon.

Once the goals were set, we worked with the governor to meet them by educating the public about the needs of higher education. Ultimately, of course, we were seeking an increase of more than $100 million in our state budget appropriations. Our strategy included:

- Conducting meetings and workshops throughout the state to follow up on developing and implementing our strategic plan for higher education. We sought to build broad-based grass roots support for our cause.
- Identifying and educating key constituencies so that they, in turn, could inform their local legislators on higher education's potential and needs. These groups included alumni associations, development foundations, advisory groups, and volunteers (ag extension and 4-H Club leaders, for example).
- Supplementing the strategic plan with two- or three-page position papers on key issues as they surfaced.
- Utilizing national publications to show what was happening in higher education on the national scene and how Oregon compared with other states.
- Organizing the governing board so that each member personally contacted ten or so legislators before and during the session.
- Meeting personally with as many legislative candidates as possible between the primaries and general election to brief them on higher education issues. Before the new session convened, I had talked to more than 90 candidates one-on-one.
- Soliciting help from organized lobbies that had a stake in the quality of higher education. This included the AFL-CIO, the Association of Oregon Industries, the Oregon Contractors Association, and the American Electronic Association. We also asked for help from mayors, chambers of commerce, county commissions and city councils, and leaders from forestry, agriculture, and banking.
- Using faculty—particulary research faculty—to brief legislators and the governor. Their enthusiasm for the discoveries researchers are making in institutions was contagious.
- Making arrangements for legislators to visit the campuses. They saw the quality of teaching and research, the potential for enhancing the excellence of programs and services, the state of equipment and maintenance, and the need for appropriate new engineering and science facilities.
- Organizing the "Governor's Education Mission" for civic leaders and decision-makers in business and the media. In this, the governor personally invited and led 45 of the state's leaders in business and industry on a five-day tour of the eight state college and university campuses.

The upshot was that in the 60-member House, higher education's major funding bills passed with only two negative votes; and in the Senate, we won 30 to zip. More than $114 million new state dollars were targeted for higher education.

Some $30.2 million came from the lottery funds. We are proud to report that in the six months since the legislature adjourned, the lottery fund investment already has helped make possible the acquisition of $32.5 million of new grants, contracts, and gifts to the state's institutions—a quick pay-back by any standards.

Meanwhile, I've got a gnawing feeling that the battle has just begun. Expectations are high. The people want a winner, and we had better produce. But up and down the line, I'm confident that the members of our faculty are eager to show the state it has made a good investment in its economic and cultural and educational future. We aim to make them proud of what they've done. We'd like for them to do it again.

**Ann Spruill**

## INTERNATIONAL AND DOMESTIC R & D PARTNERSHIPS: MAXIMIZING JOINT BENEFITS

A new triangular trade has emerged in the consortia sponsored by universities, industry and the public sector. State and regional policy makers have been riveted on the drive to expand their economic base, create stable jobs, and thus ensure the welfare of their constituents. This is not new. What is new is the increased attention to capitalizing on strengths that are unique.

In all fifty states this has included a thrust to improve university-industry linkages, both public and private. U.S. industry, hit with the two-by-four of increasing international competition, has recognized that if it continues business as usual Japan, Inc., followed by the newly industrialized countries, will squeeze their market shares and profit margins to new lows. Universities are faced with the specter of falling numbers of students, aging physical plants and accelerating equipment costs.

This climate has driven the three participants together. Their cooperation has historic precedent in the Morrill Act of 1862, experimental engineering stations, and direct involvement of university personnel in business activity. It is the variety of collaboration that is unparalleled. The American Council on Education directory lists more than 300 higher education-business partnerships. This listing of formal interactions is dwarfed by the incredible volume and complexity of informal connections. For state policy to be successful, it must be more than just aimed at the right target; it must also select the right instrument. Universities are far fewer in number than industrial firms and far more homogeneous. Therefore, policy to enhance university-industry ventures should focus on the university.

The business community well recognizes the advantages of conducting research at universities. As the Vice President of Corporate Technology at a Fortune 500 firm described it once, "Things (research, technology) aren't always in the right piles. But people have begun to rearrange academia to make it more useful to meeting the economic threats." Combine this with the perception that university-based research is less costly for the corporate sponsor than in-house efforts and more corporations are seeking entree.

Corporations are actively "university-grazing", my term for selecting and funding ventures at a variety of institutions. This phenomenon is not limited to the U.S. Corporations have joined consortia abroad as well. Digital Equipment Corporation (DEC) has been involved in ventures in Finland, Austria and England. These examples pale beside the efforts of the pharmaceutical and chemical companies. Japanese, European and Canadian firms are beginning to make similar overtures to U.S. universities.

Finding the "right" partner is made easier by the proliferation of state-supported offices abroad. In 1985 there were offices from 28 states and 11 port authorities. Minnesota spent over $7 million promoting the state internationally. It is incumbent on the university to make itself known domestically and internationally.

The majority of consortia are located at the top 100 research universities. But, there is much more volatility in this group than is normally recognized. Further, the financial and psychic leveraging available to a smaller institution from even one industrial joint venture is often substantially greater than the sunk costs of establishing the relationship.

There are the well recognized problems for higher education involved in industrial ventures: freedom of information and academic freedom. These core issues, coupled with the questions of patents and licensure, project accountability, etc., produce conflicts among the demands of the business sector, the goals of the states, and the rights of higher education. The aspirations and expectations of the universities and businesses seem to underestimate the potential rewards. The public sector appears to overestimate the payoff and on too short a time scale. The key point is that the benefits to the ventures could be staggering and the risks can be carefully minimized. Wending through the points of concern for the university will not be easy. None of them are insurmountable, and there are informed models as to how to deal with all of them.

**Recommendations**

- Focus on the most important strength of the university. By emphasizing this at first, part of the "selling" will have been accomplished by past reputation. Then you can build on the "steeples of excellence" model.
- Approach industry with a clearly defined proposal. It is always easier to edit and amend than for them to create. Should they already have a neat fit for your institution they will have found you, not vice versa.
- Identify which state and federal agencies could give your institution international exposure.
- Recognize that the payoff date is substantially longer than anyone cares to wait.

## 7. PREPARATION OF THE PROFESSORIATE: ROLE OF GRADUATE SCHOOL

*Presiding:* Reuben Smith, *Dean of the Graduate School, University of the Pacific*
*Speakers:* John D. Kemper, *Professor of Mechanical Engineering, University of California at Davis*
Robert T. Voelkel, *Vice President and Dean of the College, Pomona College*

**John D. Kemper**

### PREPARATION FOR THE PROFESSORIATE: THE TEACHER OF ENGINEERING

Last year, the American Society for Engineering Education inaugurated a two-year study known as the Quality of Engineering Education Project. Even though engineering graduates in recent years have been deemed by employers to be "better than ever," engineering educators have been concerned that there are weak points in the system which require improvement. In particular, four task forces have been created under the "Quality" project, on the following topics: (1) educational technology; (2) undergraduate laboratories; (3) faculty development; and (4) preparation for the teaching of engineering. This abstract summarizes the tentative recommendations of the last-named task force, at the mid-point of its study. The task force has twelve members: six from academia, four from industry, and two from academic associations. Of special interest to this audience is the fact that Dr. Jules LaPidus, President of the Council of Graduate Schools in the United States, is a member of this task force.

Engineering education is professionally oriented, and places principal reliance upon the bachelor's degree as the basic preparation for professional practice. Baccalaureate engineering programs typically have a strong emphasis upon fundamental principles, coupled with "hands-on" laboratory experiences, and a focus on problem-solving. In some fields of electronics, a baccalaureate is increasingly regarded as insufficient preparation, and the master's degree is gaining in its recognition as the appropriate entry-level for professional practice. The same is true for some fields of civil engineering. The master's degree, when supplemented by professional experience, is also regarded as an appropriate level of preparation for the teaching of engineering, primarily in institutions which do not emphasize research or doctoral graduate programs.

Doctoral programs in engineering have a dual function: one is to prepare individuals to assume leadership positions in industrial research and development; the other is to prepare engineering teachers. Annually, about two-thirds of the doctoral graduates in the U.S. go into industry; about one-third enter teaching. Thus, the industrially-oriented component tends to dominate the educational process.

which represents somewhat of a difference in the conditions surrounding engineering doctoral education, as compared to other fields.

A matter of considerable alarm to the country presently, is the steady erosion of the competitive posture of the United States in international markets. Engineering is only one element—albeit a vital one—relating to this problem. Engineering education can contribute to the strengthening of the competitiveness of the U.S. by a greater educational emphasis upon the totality of the process of developing and manufacturing of high-quality, low-cost products. In particular, the task force believes it is wrong to emphasize only the "manufacturing" end of this process, as currently seems to be the fashion. In fact, research may have as much to do with creating an array of competitive products as does an emphasis on automation, computerization, or other more traditional aspects of manufacturing. But research has become such a glamorous activity in recent decades, that it has obscured the importance of subsequent phases of industrial activity, all of which are vital to the making and international marketing of products. The popular image of the emergence of the "post-industrial society" has exacerbated the problem, because it has celebrated the growing dominance of the service sector, and consigned production and manufacturing to a shrinking role—perhaps culminating in their extinction.

The task force believes that the preparation received by engineering teachers is crucial to the improvement of the circumstances outlined in the foregoing. For research universities, possession of the Ph.D. degree is seen as appropriate preparation for faculty. Since research is an essential ingredient of industrial competitiveness, the research doctorate, with its emphasis upon open-ended, unsolved problems, is an excellent vehicle for the preparation both of future industrial leaders, and teachers of engineering. However, since engineering covers an exceedingly broad spectrum of activities, it is neither necessary nor desirable that all faculty in all institutions possess the doctorate. Many educational institutions, particularly those without doctoral programs of their own, will choose to accord greater emphasis to phases of the industrial process other than research. In particular, colleges with the relatively new "engineering technology" programs may prefer that their faculty have industrial experience, rather than possess the doctorate, because such programs focus upon the teaching of current practice. However, the task force believes that engineering faculty in all kinds of institutions benefit from closer involvement with industry. Such an involvement should serve to enhance the visibility and importance to the students of all phases of the process of creating new products, with an ultimate favorable impact on the country's international competitiveness. One of our recommendations is that all faculty, including those at research universities, should have a minimum of two years of industrial experience, which may consist of a combination of summer jobs, consulting and supervision of industrially-sponsored research.

A problem which continues to trouble many engineering schools is that there are not enough high-quality candidates available for teaching positions. The total number of engineering doctor's degrees is increasing, but 40 percent of engineering doctoral recipients today are foreign nationals on temporary visas. The result is that the supply of doctoral graduates who are U.S. citizens or permanent residents is smaller today than it was ten years ago, even though engineering baccalaureate degrees nearly doubled in the same time period. A major part of the problem is that academic careers are not perceived as sufficiently attractive to enough of our best students. Universities and colleges need to take steps to make engineering faculty positions more attractive in order that more of our best qualified U.S. students will wish to enter a system that leads to a faculty appointment.

A related problem is the one of teaching assistants. Most faculty have had service as a teaching assistant, but there is concern that T.A. positions are not sufficiently attractive, when compared with fellowships or research assistantships. Many engineering fellowships are available today which offer stipends ranging from $10,000 to $14,000, which is about half of a full-time starting salary for a B.S. graduate. Teaching assistant stipends need to be in the same range, to attract a reasonable proportion of the best students. In addition, service as a T.A. should be treated as a more structured learning experience than presently seems to be the case. Specific orientation courses should be devised for new T.A.s, and their activities should be supervised by experienced faculty members, with opportunities for feedback and evaluation.

A special problem for engineering is that about 44 percent of all engineering teaching assistants are foreign nationals, many of whom are reported to have inadequate English skills. The task force recommends that foreign T.A.s should be required to pass the "Test of Spoken English," administered by the Educational Testing Service, with a score of 250 out of a possible 300.

As a final matter, there is the problem of making the transition from graduate school to faculty status. It seems to be the normal practice, once a brand-new doctoral candidate has been hired, to place him or her in full charge of a number of classes, with no formal preparation other than possible prior service as a teaching assistant. Presumably, the expectation is that the new faculty member will remember enough of his/her own undergraduate years, to know what to do. The astonishing thing is that a high percentage of these new faculty do indeed know what to do, and quickly become accomplished teachers. But it seems to the task force that the transition process would be greatly enhanced if a one-week workshop were provided for new faculty members, to cover such things as: institutional goals and expectations; balancing the teaching/research/service functions; course organization and development; examinations and grading practices, and student performance. Such a one-week workshop could be held just prior to the beginning of the school year, and should be considered part of the job, carrying with it an extra week's pay.

These recommendations are relatively modest in scope, but should have a measurable and beneficial impact upon engineering education and upon the national welfare. However, even though modest, they will probably be difficult to implement, because they will cost money and require changes in outlooks. But things do change, and frequently for the better. Also, worthy activities often are undertaken, even though they cost money. The task force hopes its recommendations will be among them.

**Robert T. Voelkel**

## THE PREPARATION OF THE PROFESSORIATE: A VIEW FROM THE LIBERAL ARTS COLLEGE

When I was asked to speak today, it was suggested to me that I represented the consumer's perspective. I trust that this metaphor has its home in the language world of the economist and not the biologist. Although it may be true that those of us who employ recently minted Ph.D.s may eat them alive, it seems you are looking to me for something rather different. In taking on the task you have set, I will not seize the opportunity to engage in consumerism, even though many of the graduate schools you represent may give someone like me cause. In fact, I have long since tired of the metaphors of the marketplace in examining education. After ten years as a dean and after several bouts with consultants, I have developed a distinct distaste for talk of "inputs" and "outputs" and "products." I am sure that most of you share with me bewilderment and resentment when asked to provide evidence of success in the educational enterprise by showing the "quality of our products." I am sure that you have pondered, as I have, what constitutes evidence of wisdom, taste, and good judgment, and when we might measure for it. Therefore, I am sure that you will be happy to hear me disregard the language of the marketplace in the first paragraph and promise not to return to it again.

What I want to talk about, and presumably that is what is intended in the phrase "the preparation of the professoriate," is education. But before I do, I wish to state two rather brief presumptions just to get them out of the way and get ready for more serious business.

My first presumption is that you do not want me to complain about the notion of liberal arts colleges which most professors in the good graduate schools seem to impart to their best students. I trust you can sympathize with the frustration and anger expressed regularly by deans and department chairs in liberal arts colleges who, when engaged in recruiting, find graduate candidates under the impression that a job anywhere but in a research university is banishment to Siberia. I will presume that you know where a large proportion of the best graduate students come from, and I will presume that you also know how remarkably challenging and rewarding teaching and research can be in the liberal arts college setting.

My second presumption is that you have asked someone from a highly selective, small liberal arts college to speak because in some way we in these highly privileged environments represent the ideal type for the liberal arts college. Obviously, I cannot quarrel with this presumption, but I know, and you know, that professors in my type of college do not face the same tasks which those in others do. Despite the faculty griping I hear about ill-prepared students who are not motivated to seek the best in higher learning, teaching in a selective college is a less complex and a less discouraging job than it is elsewhere. My professors (if I may be permitted such an expression) are more like your professors than they are like those who have to wrestle with the masses. In hearing from me you are not hearing about the preparation of the professoriate in general.

With these prior matters out of the way, let me tell you how I prepared for this address. I had meetings with all of the assistant professors at Pomona College, and these meetings were also attended by a few more senior faculty who had been active on personnel committees. At these meetings I asked them to tell me what to say to you, and the chorus came back loud and resounding: we were in no way prepared to teach. Even those who had held assistantships, taught courses, been in colloquia designed to raise educational problems, and were interested in teaching issues testified to the feeling that graduate schools and graduate professors could care less about teaching and made this feeling clear to them. There was no other issue of comparable magnitude which I could provoke from my younger colleagues. Even those for whom the graduate experience had clearly been searing felt generally well prepared in their fields insofar as they were being prepared to be scholars. But they felt that there was no significant attempt to prepare them to be teachers. There also was no attempt to communicate to graduate students the importance and value of teaching.

Now I know that this is not a new issue. I am aware that these meetings have in the past taken note of the seeming dissonance between the tasks of research and scholarship and the problems of teaching. I am also aware that programs of reform for graduate education have often been put forward, running the gamut from study of the learning process on one end to organizing whole different degree structures on the other. And I wish quickly to dissociate myself from most of these various schemes. In fact, what I say today may run counter to what my younger colleagues might advocate and against some of the rhetoric about the professoriate currently in vogue.

For example, I remain extremely skeptical of the help from educational psychology and the professionals in education which is called for in certain quarters. I would oppose education-type courses in Ph.D. programs, but not because I see no value in what they study. No one of us can be unaware that understanding the situation of the learner is beneficial for the teacher. The more we know about cognition, perception, and the development of learning the better off we will be in planning courses and in leading the classroom. But I join those who contend that this realm of understanding still is the forecourt of the temple of learning and that teaching is something much more important than communication and the transfer of knowledge.

Moreover, I think that those of you who have responsibility for graduate education might well respond to us in the liberal arts colleges in much the same way I do to parents on the one hand and alumni on the other who advocate more job related instruction at the undergraduate level. Not only do I argue that we are not a trade school and that specific job related instruction is quickly obsolete; I also point out that our function is rather different. We provide skills in the liberal arts which make it easier to learn the job skills in the proper setting. I believe you can argue much the same way. You can quite properly assert that the particular skills of teaching need to be taught on the job, and that training in preparing syllabi, using one's voice, leading discussions, preparing lectures, being sensitive to the personal development of late adolescents, and socialization into the life of the faculty of the college are our responsibility. You are to train experts in the various advanced fields of knowledge, make them independent scholars, and make them ready to adapt to particular situations where they will be placed in the position of masters nurturing their own apprentices. You might further assert that we have not taken on our responsibilities very well, although, I must observe, there is a certain irony to all this. The very junior faculty members who were complaining the most about their lack of preparation in teaching have quickly adapted to the College and are successful teachers generally well respected by their students and colleagues. I will return to this point later.

Before I take up my main line of argument, I would like to comment on reform proposals suggested in the past for restructuring graduate education in ways to distinguish the role of the teacher and the research scholar. These seem to me to be misguided. The failure of Doctor of Arts programs and the like is testimony that we in the liberal arts colleges want scholars. We believe, and with good reason, that good scholars make the best teachers. We also recognize that we ourselves were attracted into the professoriate by the excitement of learning on the frontiers of learning. We were drawn into careers in teaching in large measure by the thrill of continual discovery.

Where then is the problem? The thing that struck me most in discussing this address with my younger colleagues was their answer to another of my questions: were your major professors in graduate school good teachers? Almost unanimously the answer was "no." And I was thunderstruck. For I could not relate that to my own graduate training, nor could I deal with it theoretically. If one believes, as I do, that scholarship and teaching grow from the same root, and if one's experience teaches, as I believe mine has, that one has taught most energetically and effectively when one has been engaged in deep learning and reflection, and if graduate education is, as most of us agree, the occasion for the most intense scholarly experiences, then why are graduate professors not perceived to be good teachers? Why is their role in the highest learning not acknowledged?

Now you may doubt whether my younger colleagues are correct, or whether I heard them correctly. But their voices echo criticism of the professoriate leveled by a task force of the Association of American Colleges in its study entitled *Integrity in the College Curriculum*. A constant theme of this document is that the guild of the professoriate has grown accustomed to fostering the interests of the guild rather than honing the cutting edge of disciplinary inquiry. An oddity of this document is that, although its theme is the curriculum, its polemic is addressed at professors. And the argument resounds, whether it is addressed to basic skills that should be learned or to the aims of majors: professors need to focus more fundamentally on intellection and less on perpetuating the life of their own group and its interests.

My point is really rather simple. I am asserting that we, in graduate and undergraduate education, have a *common* problem. It is an old problem, and it regularly reappears. We must revitalize learning in such a way that teaching is natural, vital, and honored. We must examine the nature of inquiry as we support it to find out why it has become routinized, subordinated to guild and institutional interests, embattled in the public arena, and seen by the young as inflicted upon them. We need to provoke in our different enterprises the excitement of discovery and never allow this excitement to be cooled by cynicism and despair. We need to recall to ourselves and our students how learning has always been a lonely, socially exposed, ill-rewarded, but absolutely captivating vocation. Perhaps we need to deprofessionalize the professoriate.

Now if you agree with me that learning is the most important thing, and if you agree with me that teaching grows out of learning, then you may also agree with me on some of the conclusions which I draw from this basic premise. You will see why I believe learning is too important to leave completely to students of education who focus on the learning process. Although what they have to offer is significant and bears our examination, learning is so inextricably bound up with ideas, their discovery, their formulation, and their re-formulation that it must be considered by every thinker. Since I would also assert that ideas only live as they are shared, how one teaches can never be avoided by one who thinks. My astonishment at hearing my younger colleagues say that their major professors in graduate school were not good teachers stems from my conviction that they would not say that their mentors were poor thinkers. And my bemused observation that those who complain about not being taught how to teach are in the main good teachers leads me to believe that they are not yet aware how very much their current engagement in learning leads them into inventiveness in sharing ideas.

But perhaps we should reflect together about what it is in higher education, and in its culmination in graduate education, that deflects our attention from the basic truth that learning generates all the energy for our enterprise. One thing which bedevils us is the complexity, expense, and cannibalizing of human energy entailed in many research processes. In the specific case of research in the natural sciences we, even in reasonably well funded small institutions, often wonder how scientific research can be conducted by our professors when they work alone under financial and temporal constraints. Moreover, it should also concern all of us that group research allows the dissipation of control over measurement, accuracy, calculation, and the drawing of conclusions. Real intellection may actually be obscured by industrial process. It may well be that your professors and my professors should get together and talk about what is really happening to disciplines and ideas, rather than continuing the research business as usual.

One could make similar observations about the growing quantification in the social sciences and the increasingly powerful manipulation of huge data sets. It is no revolutionary proposal to suggest that technical skill in producing various studies is not equivalent to insight and wise judgment about the issues involved. But we may need to reflect on whether our reward systems at both graduate and undergraduate levels send messages to students that technical skill is more valued than wisdom. I suspect that my younger colleagues would not have said their graduate professors were not good technicians.

Let me mention next a rather interesting dissonance between our experience at Pomona College and the popular perception that education is now directed by more practical and vocational goals. Humanities enrollments at Pomona College have not changed dramatically over the last ten to fifteen years. Interest in English literature, for example, has remained strong, and we have had a large number of English majors. Now not many have gone on to graduate education, and I am quite aware that jobs in the humanities for your graduates have not been plentiful. But the excitement of learning in the humanities has not seriously declined at Pomona College, even though the morale of the faculty often reflects the morale of the professoriate in the humanities at other institutions. I think it worth noting that perhaps we, who are not burdened with the professionalization of the professoriate as you are who train it, may be privileged to live with learning more comfortably and thus with more vitality.

The special case of the humanities may, of course, be generalized. In the liberal arts college many faculty remark on the pleasure it is to teach students who will not be majors in the field, or who, if majoring in a field will not be pursuing it professionally. Somehow investigation and inquiry set within the horizon of discovering one's world, rather than one's profession, is less burdened with anxiety and thus often freer and more joyful. The experience of this freedom and joy, which I and many of my colleagues have had, may be worth reflecting upon as we look at improving both graduate and undergraduate education.

Since I have spent my entire academic career in an undergraduate institution, it would ill befit me to be very specific in prescribing particular activities in graduate schools. However, if we have, as I believe, a common problem, and if, as I suspect, we both have felt embattled in this period of demographic and financial constraint, then I am bold enough to offer some direction towards re-envigorating learning and teaching in higher education. My suggestion is that we take another look at a common metaphor by which we have understood our enterprise and by which have tended to guide our policies. We look on education often in terms of the medieval crafts where masters took on apprentices and trained them to become masters themselves. Of course, this metaphor is natural, for our universities were originally guilds of the learned professions and the teachers. But there are enormous problems built into living with this metaphor. In a highly complex and technical society, the craft guilds have long since given way to industrial organizations, and the simple relationship of master to his apprentices has long since been superseded. In a certain sense, our universities have been industrialized as well. The complexity of learning and research has extended us well beyond the model of the crafts. We now have our own factories.

In all of this transformation, we may well have missed seeing that the original metaphor had its real difficulties. The master trains the apprentice in the skills of the trade. The man or woman of learning shares his or her intellectual life. The key to education at every level, but especially at the level of higher learning, is the teacher drawing the student into a share of his or her ideas and into the quest for more learning. If it is correct that my younger colleagues did not see their graduate professors as good teachers, then they either were not drawn into the intellectual life of their professors, or they did not realize they were. By the same token, the universal cry of protest from my younger colleagues that they were not taught how to teach may well indicate a lack of understanding that they are not merely to train apprentices but to share with their students an intellectual quest.

The professionalization of the professoriate may well have allowed us all to drift into forgetting that learning thrives when we are colleagues. In the small liberal arts college there is no more crying need than for intellectual collegiality. My suspicion is that this is true of graduate education as well. Indeed, I would argue that it is at the graduate level where this becomes most crucial. It may also be at the graduate level where it is most difficult to achieve, for there one must meet the demands of professionalization head on.

Establishing intellectual collegiality is no easy task. It is also no newly discovered ideal. But it needs to be re-emphasized regularly as the pressures of day by day existence in educational institutions threaten to engulf us. It also raises nasty questions like faculty student-ratios, commitments of time to students by professors, fame and fortune vs. learning and discovery, and values used in peer review. I need not be more specific, but I will not concede the ideal.

From my own graduate training I remember well two things my own major professor, my *Doktorvater*, said to a group of us who knew who the master was but also felt that we were junior colleagues. In speaking to the concern about how we would know when we had really arrived at the status of Doctor he said, "you will know which books not to finish." In answering a question about the scope of the dissertation defense he said, "this ought to be an enjoyable experience when you discuss your work as equals with your professors." As one whose college depends upon your graduate schools for its next generation of faculty, I hope you send us lots of men and women with the intellectual self-confidence not to finish books they know are not good and with the experience of intellectual collegiality with their graduate professors. They will along the way have been trained in the rigors of scholarship, and they will devote themselves to continual learning at colleges and universities where they pursue their professional careers. They ought also to be excellent teachers.

## 8. ISSUES IN ANIMAL RESEARCH

*Presiding:* Barbara C. Hansen, *Vice Chancellor for*
*Graduate Studies and Research,*
*University of Maryland Graduate School, at Baltimore*
*Speakers:* Richard C. Simmonds, D.V.M., *Director,*
*Department of Lab Animal Medicine,*
*Uniformed Services University of the Health Sciences, Bethesda, Maryland and*
*Treasurer, Scientists Center for Animal Welfare*
Charles R. McCarthy, *Director, Office of Protection from Research Risks,*
*Office of Director, National Institutes of Health*

**Richard C. Simmonds**

### THE USE OF ANIMALS IN BIOMEDICAL RESEARCH: PHILOSOPHIES, PERCEPTIONS, AND ACTION

The evolving concept that animals have "rights" is based on the philosophical position that any sentient animal has the capacity to suffer and ought not to be made to suffer solely for mankind's benefit. This new "rights" concept forms the basis for a much more radical movement than the traditional "animal welfare" movement since it is more akin to a religion than simply a desire to be compassionate to animals. Because these new "animal rightists" have the mission fervor of religious zealots, it is unlikely that the public attacks on the use of laboratory animals will ever again cease as was the case between 1900 and the 1960s.

The factors which have resulted in this increased public interest include increased urbanization resulting in less awareness of the natural interactions between species, increased environmental concerns resulting in more empathy for endangered animals, the various rights movements for minorities with animal rightists claiming the need to broaden our "sphere of moral concern" to include all sentient animals, growing distrust of science and government leading to blind acceptance of claims of large amounts of unnecessary animal research involving much suffering, significant increases in affluence permitting interested parties to devote time and money to moral causes, elimination of most of the epidemic infectious diseases in most Western societies which can lead to the conclusion that biomedical science knows all there is need of knowing, and the removal of death and dying from family units further decreasing awareness of the multitude of disease conditions still remaining to be solved and the human suffering resulting therefrom. Taken together, these factors provide an exceptionally strong foundation upon which those opposed to the use of laboratory animals may build public misperceptions and gain support for their cause.

There are serious misperceptions held by reasonable persons on all sides of the issues. As a whole, the public believes that all laboratory animals always suffer, scientists are generally uncaring and may actually be sadistic, and much research with animals is frivolous and repeated unnecessarily. Scientists also frequently seem to believe that all animal welfare advocates are kooks, it simply is too bothersome to try and educate the "ignorant masses", and, besides, the importance of their research is obvious. Legislators usually do not understand what is going on as they are mostly attorneys and have not had the biomedical training needed to understand the scientific process nor do they have time to go into each issue to any significant depth. All of these misperceptions must be corrected if the scientific community is going to retain public support for the use of animals in biomedical research and prevent implementation of overly restrictive laws sponsored by animal rights advocates.

To overcome these misperceptions, we must first be sure our own houses are in order. Chief Executive Officers (CEO) must ensure that contemporary standards of animal care and use are being met throughout their institutions. Institutional Animal Care and Use Committees must operate effectively and their recommendations must be actively supported by the CEOs. Financial resources necessary to upgrade animal care programs and facilities will probably have to be provided from institutional resources as it is unlikely that federal funds will be available. Some institutions may even have to decide to forego research programs involving animals, or at least warm-blooded vertebrates.

Once our houses are in order, we must acknowledge that publicly-funded institutions are accountable to the public. Claims of "academic freedom" can no longer be used to stifle public review of how we use animals in programs funded with tax dollars. More importantly, closed door policies only foster the public misperceptions of what goes on in the "secret" labs, especially the misperception that we are hiding the "cruelty" and "suffering" to which we supposedly subject the animals.

Actions to be taken in response to the current situations should include *a priori* public education programs for all of our "publics," i.e., our own faculties and staffs, alumni, local communities, local news media, and local and national elected representatives. Such programs must include a "controlled" open door policy for reasonable persons from all such constituencies with emphasis on the quality of the animal care and use program and the value of such programs to human and animal welfare. Every scientist and supporter of the use of laboratory animals in biomedical research should personally and regularly contact his/her local, state and national elected representatives and express his/her position on the issues.

Finally, we must also improve the physical security of animal facilities and ensure the safety of faculty, students and staff. Institutional security programs should be in place before any trouble begins and should include a detailed security analysis, good physical security of grounds and buildings as indicated by the analysis, development of written response plans for all possible contingencies such as civil disobedience demonstrations or actual break-ins and theft of animals or data, and designation of trained spokespersons to meet with the media in case of an incident.

**Charles R. McCarthy**

# THE REVISED PHS POLICY ON HUMANE CARE AND USE OF LABORATORY ANIMALS

I am delighted to be with you to discuss efforts to provide for humane care and use of laboratory animals and to establish public accountability so that an uneasy public can be assured that the animals involved in research are cared for properly and utilized in a manner that is thoroughly humane.

The Congress has taken a strong interest in the issue of laboratory animal welfare. The Office of Technology Assessment is expected to release a report describing the use of animals in research and testing in the United States. New legislation has been enacted, and amendments to the Animal Welfare Act have been passed by the Senate.

The Public Health Service (PHS), which includes the five health agencies of the Department of Health and Human Services, has responded by creating a revised policy and by initiating a nationwide education effort. The new policy has several major features: (1) it stresses sound administration of animal programs, and (2) it establishes reporting mechanisms to provide for greater accountability. It is for this reason that I am particularly pleased to have the opportunity to address the Council of Graduate Schools in the United States, because we believe that the primary emphasis for improvement of animal programs rests—not with veterinarians, animal technicians and caretakers, or even research investigators—but with administrators. Unless there is strong leadership from the top, animal programs will not be uniformly sound.

With that introduction, I will turn to the details of the revised PHS policy. The policy requires that each institution receiving PHS funds for research involving animals submit a detailed Animal Welfare Assurance that fully describes an institution's program for the care and use of animals. The Assurance should be signed by a senior institutional official who has the authority to make a commitment on behalf of the institution and who is ultimately responsible for the institution's program for animal care and use. The Assurance must contain a description of clearly designated lines of authority and responsibility, and identify a veterinarian qualified in laboratory animal medicine who will have program responsiblity at the institution.

Institutions will be asked to specify whether they are accredited by the American Association for the Accreditation of Laboratory Animal Care (AAALAC). Those institutions that are not AAALAC accredited will be required to conduct a self-evaluation, based on the *Guide for the Care and Use of Laboratory Animals*. The self-evaluation will result in a report which identifies significant deficiencies and contains an appropriate plan and schedule for correction of the deficiencies.

The revised policy more clearly defines the role and responsibilities of institutional animal care and use committees (IACUC) and will enhance the involvement of these committees in all aspects of PHS-supported research at institutions. The policy requires that the IACUC include an individual unaffiliated with the institution, the veterinarian identified in the Assurance, a practicing scientist experienced in research involving animals, and a member whose concerns are in a nonscientific area. One of the significant changes in the policy is that the IACUC will be responsible for reviewing and approving PHS applications before PHS funds may be awarded.

To ensure greater accountability, the policy contains specific record-keeping provisions and reporting requirements. Additionally, there is a provision whereby the Office for Protection from Research Risks may grant a waiver of requirements of the policy. Awardee institutions will also be subject to special reviews and site visits in order for PHS to assess the adequacy of compliance with the policy.

I hope that this brief summary of the new PHS policy has been informative. We know that many are looking to the federal government for leadership in this area. But at the institutional level, leadership must be provided by the administrators with the authority and the wherewithal to establish a sound program for animal care and use.

# Plenary Session VI

Saturday, December 14, 1985

*Presiding:* Lee B. Jones, *Dean, Graduate College,*
*Executive Vice President and Provost,*
*University of Nebraska*
*Speaker:* Charles Young, *Chancellor, University of California at Los Angeles*

**Charles Young**

## REDEFINING THE PRESIDENT OR CHANCELLOR'S ROLE IN GRADUATE EDUCATION

Gus Arlt was one of the giants in the growth and development of the UCLA campus into the institution that we are all very proud of today. He joined the UCLA faculty as Professor of German in 1935 and served as department chairman until 1944. During that time he built for us probably the strongest department of Germanic languages in the United States, offering not only the traditional specialties, but imaginative programs in Scandinavian languages and folklore. In 1950 he accepted the position of Associate Dean of the Graduate Division and in 1958 became the second graduate division dean until his retirement in 1961.

Gus was one of the real renaissance men on campus whose interests ranged throughout the arts and sciences, but his influence probably was felt most in the fine arts. He was founding President of the UCLA Art Council, President of the Los Angeles Chamber Symphony Society, and President of the American Musicology Society during the '50s. His achievements on a national level are, I think, known to all of us, such as his participation in the founding of the National Endowment for the Arts and the National Endowment for the Humanities, and his service to the Council of Graduate Schools in the United States.

Frankly, it is difficult to think of any areas of the arts and humanities at UCLA which do not owe a great debt of gratitude to Gus Arlt, and I would just like to add many happy returns during this, his 90th year.

In looking through the program for this meeting I was struck with its comprehensive nature; I cannot imagine a more ambitious theme than "Graduate Education—Past, Present, and Future." I'm inclined to wonder what will be left to talk about next year.

The program makes another statement as well. Though the theme for this conference is quite expansive, many of the workshops are very tightly focused on current administrative issues or developing trends.

The program also tells me that we are each at a disadvantage. Your disadvantage is that the program really gave you no advance clue as to what I might talk about.

My disadvantage is certainty of my repeating many things that might have been said, probably more eloquently, earlier in this conference.

As great as this disadvantage is, there is one small comfort in all this. President Zumberge is in an even more uneviable position.

Most of you here are graduate deans; for some of you this is a part-time, for some, a full-time job. Most of you, I'm sure, do not plan to be graduate deans for the rest of your academic careers. Some of you may see your administrative service as an interesting and challenging interlude, and yearn to return to teaching on a full-time basis. Others in this room may see their current position as a step on the road to other academic administrative positions.

You are already a part of the central management team of your particular institution. From your vantage point, I'm sure you've had the opportunity to assess the duties, responsibilities and style, efficiencies and sense of priorities of your particular president or chancellor. I am going to try to avoid the worst aspects of redundancy by talking not about graduate education *per se* (past, present, or future) but by saying something to you about the role I and my fellow presidents and chancellors play in this process.

A great deal has been written about what presidents or chancellors are supposed to do, but I'm afraid much of it sounds like it originated across the street in Fantasyland.

Perhaps the most traditional notion is that the president ought to be the chief scholar, that is, the most distinguished and venerable, scholar that can be found to take the job. Those who support this theory hold that only a lifelong scholar can best know and lead the hearts and minds of other scholars. These theorists believe that if a person can teach a class and do quality research, running a university ought to be a piece of cake. A corollary of this theory is that administrative skills are not particularly important . . . never mind the administrative details, others will worry about that.

As might be expected, the next theory about what university heads ought to be doing is the antithesis of the first. Those who espouse this theory believe that a college or university is filled to the brim with bright scholars; what is needed, they argue, is a capable administrator. Some even go so far as to say that academic degrees are less important than business experience, the more "bottom-line" experience, they say, in the so-called "real world," the better.

A more recent theory, is a kind of combination of the first two; it states that scholarship and administrative skills are important, but that neither really matters as much as the CEO's ability to attract private funds to a particular college or university. The top person, under this theory, is a kind of ceremonial head of state. It helps if he or she is a good dresser and witty conversationalist.

These first three theories of leadership might be categorized as the development school. There's another group of observers, who have become popular in the literature, who might be categorized as the organizationalists. These organizationalists, for some reason, tend to be rather pessimistic; they look at the institution and ask, "How could anyone hope to manage it?" Two of the organizationalists, Michael

Cohen and James March opine, and I quote, "The American college or university is a prototypic organized anarchy. It does not know what it is doing. Its goals are either vague or in dispute." I suppose that under this theory the chief executive could be defined as one who presides over anarchy.

George Keller, in his book, "Academic Strategy" talks about, "The Great Crisis in Leadership". Keller writes, "At the very time that the need for strong leadership in higher education has reached new levels of urgency, academic management is in chains." Who is the sadistic villain that Keller sees? According to Keller, it's the faculty. I quote, "There is now a stalemate in the exercise of power on the American campus. . . the main standoff is between the faculty and the president."

In support of this notion Keller quotes Columbia's Paul Lazarfeld, who observed "academia's institutional paralysis derives chiefly from the neatly balanced powers of the campus executives and the professional scholars." If things are really this bad, one is tempted to ask, "Why even attempt to manage?"

Where does this leave us then in attempting to more clearly define the duties and responsibilities of the president or chancellor? What are the ideal attributes? Is the job really unmanageable today? When Stephen Joel Tractenberg reflected on his appointment to the presidency of the University of Hartford he wrote, "As a glance at my advertisement for a college president will make clear, the school is looking for a man or woman who combines Jesus' capability for love and John Kennedy's charisma, with the penetrating insight of Socrates, the wit of Will Rogers, and the entrepreneurial flair of the House of Rothschild."

My personal definition is a little different. To be sure it has changed during the 17 years I've been chancellor—my priorities have shifted many times. But through the years there are certain qualities that have stood the test of time.

*The first quality is adaptability.* Just as a university has been described as a continuing creation, its leadership must be able to continually shift gears to keep up with the task at hand.

The mission itself is constantly changing. For UCLA in the 1930s the mission was very fundamental—establish graduate education. At that time the Berkeley campus was the only public institution in the state of California that offered graduate instruction. In 1930 there was a proposal to award one graduate degree to a student on the Los Angeles campus by setting up a joint degree program, working through the graduate division at Berkeley. The initial response from the Berkeley dean was clear—he wrote back, "I want you to know that they will *never, never, never,* offer graduate work on the Los Angeles campus."

Fortunately, after many tribulations, a graduate program was eventually authorized for UCLA and the first 42 master's degrees were awarded in 1934. In 1936 the regents authorized work leading to the Ph.D., and the first one was subsequently awarded in 1938. Last year we awarded 480 Ph.D.s and another 590 doctoral level degrees to doctors, dentists and lawyers. That obviously represents a major change for a so-called conservative institution in the period of 55 years and required an extraordinarily adaptive administration.

But to possess adaptability does not mean one should be too eager to change. In a rush to be "relevant" to society some are tempted to do away with the more classic programmatic offerings and goals. Such temptations clearly must be resisted with equal force.

*The second fundamental task* for the modern president or chancellor as I see it, is responsibility for the acquisition of resources. Obviously the most needed and effective graduate program, for example, cannot flourish without the existence of a first rate library. Here again, circumstances can change dramatically over the years. UCLA's Lily Bess Campbell, the distinguished English scholar who joined the faculty in 1922, recalled her first visit to the campus library.

"Do you have any materials on Chaucer?" she asked the loan desk attendant.

"Oh yes!" she replied brightly, "we have *a book* on Chaucer."

Today our campus library system houses nearly 6 million volumes. In October of 1985 the Association of Research Libraries reported to us that UCLA's library is now second only to that of Harvard in its overall quality. Today's students looking for materials on Chaucer will have a much easier go of it.

I cite the example of the UCLA library not to brag, but to point out that this growth did not occur because a librarian forgot to cancel a magazine subscription, but as the direct result of the actions of a number of chief administrators. They were placing emphasis on the acquisition of resources, for the highest priority academic needs of the campus. Surely that is a major function of the effective CEO.

But if today's university president is to be helpful to your graduate program, he or she must know what resources are needed and must be able to establish firm priorities among the various campus needs. While a good administrator must be willing to assume the uncomfortable job of making the ultimate decisions where there are conflicting priorities, he can establish these priorities only in consultation with a broad spectrum of the campus community and here again, it is you who can best keep the needs of the graduate program at the forefront of his thinking.

Another part of the acquisition of resources task is not only knowing where to find them but being able to determine which, among many options are the most appropriate for the specific purpose given the total campus needs. At first blush that may seem like a simple job, but consider the possibilities . . . Should the new genetic research institute on your campus be funded by the federal government, the state government, a private foundation, an individual benefactor or perhaps a combination of several or all of the above? The ability to understand, package and negotiate these complex arrangements is a rare skill, but one that in my opinion is essential to a truly effective president or chancellor.

A third characteristic of a chief executive is that of being an effective spokesperson for the work that you do. If the president is successful at this there may be a resource benefit to the institution, but I don't tie this characteristic directly to resources. Under this heading the CEO may be called upon to mediate a dispute among minority graduate students who feel their numbers are too small or that perhaps other student groups or the administration are unsympathetic to their needs and concerns. Or the president may be interpreting the long range needs of graduate education to the governor, the legislature, a host of governmental agencies. The president must be a kind of translator of what the mission of the university is to a whole host of publics: alumni, major donors, the news media, the neighbors, the business community, the staff, students, parents, mayors, city council members, and so forth.

In this translator role the CEO must be at least multi-lingual. He or she must speak the language of the university to the academic community and also be able to translate in understandable terms for a variety of other audiences. Again, this task is more difficult than it may sound. These various publics may not always want to hear what you have to say. Their interests may be competing directly with those of the university or with each other.

Though universities and university administrators are fortunate to be fairly high up on the credibility scale of institutions and professions, the CEO must be undaunted by the fact that most audiences will greet whatever he or she has to say with skepticism. Of at least equal importance with the ability and desire to carry a message is the necessity of a well-defined sense of what that message ought to be. That may seem obvious, but too often, I think, it is simply "We need your support." Today's publics are bombarded with pleas for support. We need to borrow a page from the professional marketer and talk benefits.

The public needs to understand, for example, that graduate education is unique in that it is specifically focused on adding to man's storehouse of knowledge and providing expertise for society. The research done in our nation's graduate schools accounts not only for the vast majority of advances that have increased the span of human life on earth but equally as important increasing the quality of that life. The public needs to be reminded that graduate schools are not places where students go to hide from the so-called real world, but are the institutions which produce our doctors, lawyers, dentists, teachers, social workers, librarians and scientists, and scholars.

The fourth and final characteristic of an effective president or chancellor is at least as important as the first three. I believe that the head of a university must be the academic leader of that institution. The person at the top must have not only a sense of direction for that institution as a whole but be a major decision maker, and he must be able to communicate that direction to the campus community as well as the community at large.

A major aspect of what I am calling academic leadership is the ability to inspire an esprit de corps within the institution by its various members. If faculty, for example, have confidence in the institutional leadership they will want to excel not only for themselves, but because it benefits the institution. Excellence by any member of the institution must be recognized. Rewards for positive performance can be psychic as well as financial.

An example of the type of leadership that I believe a responsible university head must exercise can be found in the area of affirmative action. Most institutions recognize their need to do more in this area but sometimes, I'm afraid, we tend to take too narrow a view of the solution. Temporary gains in the ranks of minority faculty and graduate students are all too frequently made at the expense of other institutions. In a game of marbles, if one player captures all the green marbles he can boast that he has more green marbles than anybody else, but he hasn't added a single green marble to the total; he's just shifted them around.

The way to attack this problem, it seems to me, is not to raid faculty from some other institution simply for statistical advantage. The solution must be far more comprehensive than this, and unfortunately, will take years to run its course. The way to increase the pool of women and minority faculty members in this country is to enlarge their representation in graduate programs. The way to do that is to enlarge their numbers in the undergraduate ranks. The way to do that is to reach down into high schools and even junior high schools and identify those students who have college potential and be certain they understand what they have to do to be eligible to attend a college or university. I know this may seem obvious to most of you, but unless it can be made clear both internally and externally, goals will be set which are inappropriate and unattainable and the lack of apparent success will lead to frustration and demoralization. Setting the proper goals in this area, communicating them and then challenging the faculty to achieve success is a terribly important part of academic leadership at this point in history.

I also include under the heading of academic leadership an appropriate role within the educational community as a whole. It is not enough for today's university president to be an able spokesperson for his own institution. If, for example, there has been an erosion of merit-based graduate financial aid, it is the obligation of an educational leader to let Congress, and the rest of society, know about the consequences, short term and long term, of that erosion. The institutional leader can and should propose solutions and support meritorious proposals placed on the public agenda by others.

I believe an effective academic leader must also have a sense of the university's role in society, and its place in history. Our science and our technology are changing very rapidly. Society has an agenda of social, economic and aesthetic needs that does not equate perfectly with what research and technology is able to provide. The challenge for the future has been stated very eloquently recently by Dr. Simon Ramo, "The art of mixing together in a harmonious ensemble, public value judgements, creativity, and technical analyses with workable pragmatic actions transcends the established expertise of any recognized professional." [From *America's Technology Slip*]. I would add that that may very well be a major portion of the job description for the president or chancellor of the future.

This then comprises my sketch of today's chief executive: adaptability, resource acquisition, translator to many publics, academic leadership to the educational community and society at large. Mixed through all these characteristics I have added the ability to understand, synthesize and promote very complex solutions to very complex problems.

If by chance you aspire to the post of chancellor or president I can tell you that it is one of the most difficult, challenging, yet rewarding professions on earth. Fortunately, it isn't really all that lonely at the top. People like you are constantly making people like me, and Jim Zumberge, look good, and we thank you for it.

# Plenary Session VII

*Presiding:* David S. Sparks, *Vice President for Graduate Studies and Research, University of Maryland*
*Speaker:* James H. Zumberge, *President, University of Southern California*

**James H. Zumberge**

## FROM SPECIALIST TO GENERALIST: THE ROLE OF THE GRADUATE SCHOOL IN STRENGTHENING UNDERGRADUATE EDUCATION

The October 17 issue of the *Wall Street Journal* carried an article which highlighted a problem dear to the hearts of many the president of a large, international university: the complaints by undergraduates across the country that they can't understand the English of foreign TAs and instructors. No one disputes the undergraduate's right to an instructor who can communicate clearly and effectively. As one student interviewed for the article put it, " 'It's tough enough adjusting to college without the added burden of having unintelligible instructors.' " (p. 31) Yet at the same time, most of us agree on the value of a mixture of nationalities and cultures on our campuses. As I pondered the article, I couldn't help wondering, "Why just foreign TAs? Don't all teaching assistants have trouble communicating with their undergraduate charges? And, for that matter, what about faculty too?" The problem of English language proficiency in the classroom struck me as a metaphor for the larger problem of how teaching assistants and faculty communicate with undergraduates at all, and especially how young faculty members, fresh out of their superspecialized careers as graduate students, transform themselves into stimulating, effective, broad-minded instructors of freshmen and sophomores. How do they make the leap from the esoteric dissertation defense in front of three faculty advisors in May to the introductory course to 300 freshmen in September? Some of them do it by natural instinct. A few succeed because of conscious efforts their departments made to give them realistic teaching experiences as graduate students. But many fail, either for a few years until they learn the tricks themselves, or indefinitely, because they never mentally left the safe enclosure of specialized graduate study.

The problem is a serious one, for as our knowledge continues to grow geometrically, many disciplines are moving to greater and greater subdivision and specialization. Yet, at the same time, undergraduates are entering our institutions with less adequate academic backgrounds, with fewer common assumptions, and with less of a shared knowledge base than their predecessors. Many also bring less of a belief in the value of knowledge for its own sake, or at least the value of a liberal arts education.

This means that young faculty must do even more of a selling job to stimulate intellectual interest among their students in general education subjects, at that point in their own careers when they are farthest removed from these subjects—fresh out of graduate school. What young faculty members need to know to flourish as college teachers and what we teach them as graduate students often have little in common. I suggest to you, as graduate deans, that this is an area which warrants closer attention.

There are many faces to this monster. From the undergraduate's point of view, college is a means to an end. And that end, in 1985, is spelled J-O-B. In the May issue of *Change* magazine, Jan Krukowski confirms that two of the criteria students use most to judge the academic quality of a college or university are: 1) its ability to place its graduates in good jobs, and 2) the admission of its students into graduate and professional schools (also translated jobs, with more dollar signs). "The market for entry papers to prosperous middle class life is booming," Krukowski tells us; "the market for an education, especially the liberal arts education that's been so central to our collegiate tradition, is dying." (p. 21)

Anyone who has taught an introductory or survey class to nonmajors in the past five years has had firsthand experience of this phenomenon: undergraduate students want and expect high quality in their major fields of study—at least the better ones do—but they are indifferent, and even hostile, to the liberal arts courses which make up their general education requirements. The cry of "relevance" is as much with us today as in the '60s and '70s, but now it is relevance to job and career plans, rather than society's needs.

At the same time that students are balking at a liberal arts education, parents, legislators, and even Secretaries of Education are seriously questioning whether a college education is worth the $15,000–$50,000 it costs, whether students are really getting their money's worth. The last two or three years have seen a plethora of reports on the deterioration of undergraduate education, the need for rejuvenation and rededication to the teaching of the basics, and an emphasis on greater intellectual rigor, even as funds for higher education support are being cut.

Into this onslaught of criticism and indifference come the new faculty members, still breathless from their graduate school endurance tests, or perhaps heady from one or two intervening years as postdocs. Somehow, they are expected to save undergraduate education; to entertain and intrigue their indifferent students; to broaden their minds and stimulate their psyches; and even, if the muses are smiling, to instill in them some of that excitement of discovery which fuels the faculty members' own intellectual engines.

Unfortunately, very little in these young faculty members' graduate education prepared them for this struggle. They were trained to be practitioners of an elite trade called research, to talk to a smaller and smaller group of colleagues about a narrower and narrower problem. They were taught how to publish articles, set up research labs, and decipher original texts—all of which are exciting and valuable activities—but few were taught how to transfer the general knowledge of the discipline they learned early in graduate school or even as undergraduates. Even fewer were taught that teaching non-specialists could be an exciting, valuable, and challenging part of their careers—not just a necessary evil to be endured on the way to tenure and a private office. The graduate schools of this country do extremely well what they are intended to do, and what only they *can* do: they train individuals to become highly competent researchers and scholars or highly trained professionals. But they do not do so well in what is also their charge: to prepare the faculties of this country to teach in our colleges and universities.

There are a number of perfectly good reasons why the rope which ties graduate training to undergraduate training has become so frayed. First, there is unquestionably a much smaller percentage of graduate students going into academic positions now than in past years. Twenty-five years ago, when CGS first began, there were fewer than 10,000 doctorates issued in this country. Of those new doctoral recipients, 44% took academic jobs right out of graduate school. In 1982, there were 31,000 doctorates awarded, but only 28% took jobs in academe. The percentages vary immensely by discipline, as you would expect, from relatively small percentages in the sciences and engineering (where jobs in industry and postdoctoral study offer stiff competition) to fairly high percentages in those fields for which academic employment is still the major option for most doctoral recipients. Even in this latter group, though, the decline in the percentage of students who take academic employment has been dramatic since 1960. With more and more graduate students looking to employment outside the university or college—either by choice or by necessity—it is no wonder that interest in undergraduate teaching has declined in graduate schools.

At the same time, the knowledge and technology boom has increased the pressure on graduate schools to emphasize research and scholarship, even schools which have traditionally seen themselves as teaching institutions. It is research and scholarship in which faculty and their graduate students can most visibly excel, and which will most likely be supported with federal funds, and lead to high prestige. I do not wish to imply that research is not important or that it should take second place in graduate education to teacher training. Not at all! It is the life-blood of graduate study and the sole source of the country's vital and now diminishing supply of scientists and scholars. But it must not be the sole purpose of graduate education—whether the graduate is bound for academe or not.

One of the more insidious forces promoting excessive specialization and isolation in graduate education is the tendency of academic disciplines to divide and multiply. Scholarly and scientific disciplines seem to follow natural laws of their own in spawning new offspring or attaching themselves to new mates, and as scientists and scholars we are obliged to follow them wherever they lead. The danger lies in assuming that a separate, free-standing administrative unit must always be created to represent each new field. Academic departments have a tendency to take on lives of their own, separating students and faculty in often artificial ways. While some of this division is inevitable, it is aggravated by our own administrative tendencies to create permanent, bureaucratic walls around our ideas. It makes us narrow as faculty members and administrators, and it certainly restricts the experience of our graduate students.

Concern for overspecialization is shared by many in the academic community. Robert Kirkwood, for example, in a recent article on "The Quest for Quality in Graduate Education," voiced the opinion that:

> "...departments see themselves only in terms of similar departments in other universities; they rarely relate to other departments of their own graduate school, or to professional schools within their own universities. Equally rarely do they see themselves in relation to other institutions in their immediate vicinity.
>
> "Where periodic review[s] of graduate departments are made by outside scholars, the evaluators invariably are people of the same specialty within a discipline. Specialization and sub-specialization have become a kind of security blanket; only similar specialists are seen as qualified to assess the quality of one's own specialty. Ultimately this attitude may lead to sterility of disciplines that could accelerate their own oblivion." (*Educational Record*, p. 5)

Given this circumstance, is it any wonder, when graduate students take their first academic job teaching Introduction to Psychology or Biology 105 to 400 freshmen, that they go into intellectual and cultural shock? As one former English instructor described it (and I emphasize "former"), " 'English' to me was poetry, literature, writing—not teaching, grading freshman themes, and attending department meetings." (*Teaching and Beyond*, p. 39) Graduates who were trained in highly specialized programs find that they have to learn a whole new set of skills: public speaking, counseling, leading group discussions, designing tests, assessing performance, motivating and entertaining an audience, and more. As a recent Ph.D. in the humanities who took a job in business put it, they are like "someone who has been training for a swim meet and at the last moment learns it is a foot race." (*Teaching and Beyond*, p. 166)

What preparation do we give our graduate students for what they will face in the classroom? Many graduate students are teaching assistants through all or part of their graduate careers, but others are not. And all too often we treat the TA experience as a necessary evil to cover our undergraduate instruction needs or provide desperately needed financial support for graduate students, rather than as a valued and necessary part of each graduate student's training. In research institutions at least, TAships are seen as second-class work by many faculty and graduate students; the real plums are the RA appointments, where students can get into their own academic work and learn vital technical skills.

Where students do have TAships, do we give them the kind of training which will really help? Do they have a chance to prepare their own lectures, lead discussion sections, counsel students, design and grade papers, defend their grades to students, and decide how much material fits in a four-unit introductory course and how best to cover it in fourteen weeks? If they do have a chance to learn these skills, do they try them out under the watchful and friendly eye of a faculty mentor, or catch-as-catch-can on their own? Is the faculty supervisor involved in helping his or her TAs become competent teachers, or does he or she just see them as a way to be insulated from the frustration of dealing with undergraduates directly and the drudgery of paper grading? As one USC instructor put it, "A good TA is one who does exactly what you tell him and doesn't require any of your time."

The final face of the monster which I would lke to unveil is perhaps the most disturbing one. It is the morale of the faculty who teach our graduate students and the attitudes toward the teaching profession which they convey. In a recent preview of their new book on the American professoriate, Jack Schuster and Howard Bowen describe the current morale of faculty in higher education as "shaky." They cite the drop in real dollar earnings since 1970, the deterioration of the work environment, and the poor academic job market as contributing factors.

This analysis mirrors opinions of other key educators. In the August 1985 issue of the *CGS Communicator*, for example, your own President, Jules LaPidus, reminded us of the opinion expressed in a recent report of the Association of American Colleges "that the trouble with American undergraduate education is American graduate education, and that the faculty have become so involved in scholarly pursuits and so discipline-directed that they have turned away from their role as [teachers]." (p. 6)

It doesn't take a seer to draw the connection between these faculty morale problems and the absence of strong, positive training for graduate students who will soon become faculty themselves. Graduate students soon learn from their professors whether teaching is important, whether the academic life does indeed have any special rewards, and whether undergraduates are worth spending time on, or simply a duty to pass on to the junior faculty as soon as possible.

There are many reasons why this issue is a vital one. First, demographics will change. By the mid-to-late 1990s, the college-age population is expected to increase significantly, to say nothing of the returning adult population. Clearly more academic jobs will be available, and most in demand will be those with some skill in undergraduate instruction. In the next ten or fifteen years—and certainly the next twenty-five—we will see an increasing demand for college professors.

Second, graduate school should be a time of preparation for the full range of duties expected of our students in their future faculty careers, not only research and scholarship. Our universities and colleges need scholars, no question, but scholars who can and like to teach. Can we honestly say we have fulfilled our responsibility if we ignore either part of a graduate student's education?

Third, we do ourselves a direct service by strengthening the quality of undergraduate education. Graduate students don't fall to us from the stars; they grow up out of our own baccalaureate institutions. They will be as well prepared for advanced study only as their own undergraduate training permits them to be.

Fourth, an argument can certainly be made that teaching is a valuable experience for every graduate student, whether he or she plans to become a college professor or not. What better way to learn a subject, as we all know, than to teach it? And to learn to communicate one's ideas and research interests to laypeople? Surely these are skills which professionals in industry and business need as well as professors.

To address this problem, let me suggest some specific approaches which graduate schools might adopt. First, there are two approaches which don't work. One is to require formal courses in pedagogy to be sure that graduate students acquire the requisite teaching skills. Patricia Cross of Harvard, in the September 1985 issue of the *AAHE Bulletin*, argues for some kind of formal preparation:

> "I really think the graduate school has to take an enormous amout of blame for doing nothing to prepare people for what they're going to spend their professional lives doing. If graduate schools, and here I mean the departments themselves, made teaching a part of the preparation they provided students, if they helped them learn how to teach the discipline's subject matter to undergraduate students, there would be a great gain."

I agree with this general position, but I don't agree with Professor Cross's solution. She would have graduate schools requiring *formal* preparation for teaching their general disciplines to undergraduates. I see no need to change the curriculum of graduate programs to incorporate specific courses on teaching; those programs are necessarily dedicated to the mastery of complex subject matter and research skills. Cross's statement, though makes clear the feeling of some respected educators that graduate schools have been ignoring for too long what happens to their graduates after they receive their degrees. How much better if we initiate our own efforts at teaching improvement, rather than wait for undergraduate institutions to send us an ultimatum!

The other approach which will not work is to assume graduate schools have no responsibility for what happens after graduation, and let colleges and universities devise their own training programs for new faculty. This laissez-faire approach works, of course, for the best young faculty—those who have a flair for teaching anyway, or who are smart enough to learn from their mistakes in the first year or two. But what about those who don't have the flair, who are simply performing the necessary yeoman's service, or who genuinely need some help?

Let me propose some approaches in the middle ground. First, I would like to see more faculty mentoring and coaching of graduate students while they serve as TAs. This includes giving them a chance to lecture and lead discussion sections, prepare and grade exams, and prepare a syllabus for a course or at least a portion of a course. It involves regular meetings to talk about problems and even sitting in on the graduate students' classes to see them in action.

Second, every graduate student—TA or not—should have an opportunity to make a public, formal presentation of research work, ideally on several occasions. Many departments do this already in a formal research seminar or informal departmental gathering. But these are captive audiences, so the presentations are still couched in specialized jargon. Graduate students need experience in the presentation of their research in a broader context. Graduate schools could sponsor regular meetings of a more diversified audience so that the graduate student making the presentation is forced to frame his or her lecture in a broader intellectual setting, void of terms and assumptions that only his or her fellow specialists would comprehend.

Third, a spirit of openness in graduate departments is needed to create an interest in interdisciplinary studies and an appreciation of neighboring disciplines. Formal graduate coursework will necessarily be specialized, but that doesn't mean that students can't be encouraged to develop interdisciplinary interests informally, to attend seminars and lectures given by other departments, and to see the connection between their area of specialization and the broad knowledge base on which it lies.

Fourth, there must be a clear value system in graduate departments which says that teaching is important. If undergraduate courses are taught and enjoyed by the senior faculty in the department, who enjoy strong reputations in research, instead of just the young assistant professors or TAs, graduate students will learn early on that teaching is an important part of the academic enterprise.

Let me hasten to say what I hope is obvious, that research is absolutely essential to the graduate enterprise, that the best undergraduate teachers are also scholars. But the two are inextricably bound. The best teachers know that continued scholarship backs up the teaching process; likewise, most good researchers like to try out their theories or results on a non-specialist audience.

As graduate deans, you are in a unique position to assert that both teaching and research will be honored at your institutions, both undergraduate and graduate education, and that students will leave your programs with a strong sense of the value of both and an ability to integrate their chosen field of specialization into the academic community or the society at large.

When this group meets twenty-five years from now in the year 2010, specialization will have taken on a new meaning; some fields have died, but many more will have been born. Our undergraduate populations will be larger, and certainly more diverse, and we will feel intense competition for the educational dollar from a variety of for-profit companies and institutions. If we are to excel, or even in some cases survive, we will have to make ourselves more responsive to the needs of our new undergraduate clientele, and more able to communicate with them. 1985 is not too early to start.

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Leslie M. Thompson, President, Provost of the Graduate School, Texas Woman's University, Denton, TX 76204 (817/383-2302)

Carl D. Riggs, Vice-President, Dean of the Graduate School, University of South Florida, Tampa, FL 33620 (813/974-2846)

Arnold E. Schwartz, Secretary-Treasurer, Vice Provost & Dean of the Graduate School, Clemson University, Clemson, SC 29631 (803/656-3195)

Bob F. Perkins, Past President, Dean of the Graduate School, University of Texas at Arlington, Arlington, TX 76019 (817/273-2681)

## Midwestern Association of Graduate Schools

*Executive Committee 1985*

Eric Rude, Chairman, Associate Dean of the Graduate School, University of Wisconsin-Madison, WI 53706 (608/262-0370)

Vaughnie J. Lindsay, Past Chairman, Dean, Graduate Studies and Research, Southern Illinois University at Edwardsville, IL 62026 (618/692-3010)

Suzanne Reid, Chairman-Elect, Graduate Dean, Western Illinois University, Macomb, IL 61455 (309/298-1806)

Henry F. Holtzclaw, Jr., Member-at-Large, Dean of Graduate Studies, University of Nebraska, 3835 Holdrege St., Lincoln, NE 68583 (402/472-2861)

R. F. Kruh, Secretary-Treasurer, Dean of the Graduate School, Kansas State University, Manhattan, KS 66506 (913/532-6191)

## Northeastern Association of Graduate Schools

*Officers 1985*

Clara I. Adams, President, Dean, School of Graduate Studies, Morgan State University, Baltimore, MD 21239 (301/444-3185)

Robert B. Lawson, Past President, Associate Vice President for Research and Dean of the Graduate College, University of Vermont, Burlington, VT 05405 (802/656-3160)

Helen S. Cairns, President-Elect, Dean, Graduate Studies and Research, Queens College of CUNY, Flushing, NY 11367 (212/520-7313)

Sister Anne L. Clark, Secretary-Treasurer, Dean of the Graduate School, College of Saint Rose, Albany NY 12203 (518/454-5136)

Fred G. Burke, Member-at-Large, Graduate Education and Research, University of Connecticut, Storrs, CT 06268 (203/486-3619)

Harry Rubinstein, Member-at-Large, Dean, Graduate School, University of Lowell, Lowell, MA 01824 (617/452-5000)

Howard B. Palmer, Member-at-Large, Acting Dean, Graduate School, Pennsylvania State University, University Park, PA 16802 (814/865-2516)

Stephen J. Reno, Member-at-Large, Associate Provost, Office of Graduate Affairs, University of Southern Maine, Portland, ME 04103 (207/780-4386)

## Western Association of Graduate Schools

*Officers 1985*

Michael Malone, President, Dean of Graduate Studies, Montana State University, Bozeman, MT 59717 (406/994-4145)

Lee B. Jones, Past President, Dean of the Graduate College, Executive Vice President and Provost, University of Nebraska, Lincoln, NE 68583 (402/472-2861)

A. Charlene McDermott, President-Elect, Dean of Graduate Studies, University of New Mexico, Albuquerque, NM 97131 (505/277-2711)

Dale R. Comstock, Secretary-Treasurer, Dean of Graduate Studies and Research, Central Washington University, Ellensburg, WA 98926 (509/963-3101)

William Spitzer, Member-at-Large, Dean of Graduate Studies, University of Southern California, University Park, Los Angeles, CA (213/743-5177)

John M. Dewey, Member-at-Large, Dean, Faculty of Graduate Studies, University of Victoria, P.O. Box 1700, Victoria, B.C. V8W 2Y2 Canada (604/721-7970)

# The Constitution of the Council of Graduate Schools in the United States
(as revised January, 1984)

### *1. Name*

This organization shall be called the Council of Graduate Schools in the United States, hereinafter referred to as the "Council."

### *2. Purpose*

The Council is established to provide graduate schools in the United States with a comprehensive and widely representative body through which to counsel and act together.

Its purpose is the improvement and advancement of graduate education. The purview of the Council includes all matters germane to this purpose. The Council shall act to examine needs, ascertain best practices and procedures, and render assistance as indicated; it may initiate research for the furthering of the purpose. It shall provide a forum for the consideration of problems and their solutions, and in meetings, conferences, and publications shall define needs and seek means of satisfying them in the best interest of graduate education throughout the country. In this function the Council may act in accordance with the needs of the times and particular situations to disseminate to the public, to institutions, to foundations, to the federal, state, and local governments, and other groups whose interest or support is deemed of concern, information relating to the needs of graduate education and the best manner of satisfying them.

In the analysis of graduate education, in the indication of desirable revision and further development, in the representation of needs and all other functions related to effecting its purpose, the Council not only shall be free to act as an initiating body, but it shall assume direct obligation for so doing.

### *3. Membership*

Membership in the Council of Graduate Schools in the United States shall be limited to two categories: Regular and Sustaining. All members shall be aware that the Council is devoted to excellence in graduate education as interpreted by occasional position statements outlining philosophies, policies, and procedures of graduate education. Applicants for membership shall display evidence as to qualifications in a form and as otherwise prescribed by the Council. All applications will be reviewed and evaluated by the Council's Membership Committee, which will bring its recommendations to the Executive Committee for action.

A. Regular Membership. Institutions of higher education in the United States which are significantly engaged in graduate education, research, and scholarship, and the preparation of candidates for advanced degrees are eligible for Regular Membership. Applicant institutions must already have been approved to offer graduate work by the appropriate regional accrediting association, and shall have awarded at least thirty master's degrees or ten doctoral degrees (or combination thereof) in at least three distinct and separate fields or disciplines within the three years immediately prior to the date of application. Applicant institutions must also have a formally organized administrative unit responsible for graduate affairs. Each application for membership shall contain evidence as to these qualifications in a form prescribed in the Bylaws.

B. Sustaining Membership. Both profit and nonprofit organizations such as research institutes; testing and evaluation corporations; philanthropic and charitable organizations; federal, regional and state agencies; public and private research and development corporations; and foreign and multinational organizations are eligible for Sustaining Membership. Such organizations must recognize the value of quality graduate education across a broad range of scholarly, technological and creative endeavors. Through their participation and membership dues they help the Council carry out its central mission and purpose, while gaining access to its resources and activities.

Sustaining Members are encouraged to interact and communicate with Regular Members both informally and formally. Sustaining Members may attend CGS meetings and other sponsored functions; however, they do not have voting rights nor are they eligible to hold elected CGS office.

They are listed in the annual CGS Directory and receive the same generally distributed information and material as Regular Members. Appropriate annual membership dues will be levied by the Council (see Article 11). CGS neither endorses nor represents the interests of Sustaining Members, explicitly or implicitly.

Applications for Sustaining Membership shall be made in a form prescribed by the Bylaws. Each applicant will be considered by the Membership Committee in light of the Purpose (Article 2) of the Council.

### 4. *Voting Power*

In all activities of the Council, each regular member institution shall have one vote. More than one representative of any institution may attend the meeting of the Council, but the member's vote shall be cast by the individual designated as the principal representative of the member by the chief administrative officer of the member institution.

### 5. *Officers and Board of Directors*

The officers of the Council and the Board of Directors shall be a Chairman, a Chairman-Elect, and the immediate Past Chairman, each serving for a term of one year. In the absence of the Chairman, the Chairman-Elect shall be presiding officer of the Board of Directors and the Council.

There shall be a Board of Directors of twelve voting members, composed of the Chairman, the Chairman-Elect, the Past Chairman and nine members-at-large. Three members-at-large shall be elected annually by the members of the Council in the manner specified in Article 8 for terms of three years which begin immediately after the Annual Meeting.

The Chairman-Elect, chosen by the Board of Directors from its own past or present membership, shall serve in that capacity for one year. The following year, the Chairman-Elect will assume the office of Chairman, and the following year, the office of Past Chairman.

Each voting member of the Board of Directors must be the principal representative of an institutional member of the Council and none may serve for two consecutive full terms.

If the Chairman is unable to continue in office, the Chairman-Elect shall succeed immediately to the Chairmanship, and the Board of Directors shall choose a new Chairman-Elect.

Any vacancy occurring among the membership-at-large of the Board of Directors shall be filled in the manner specified in Article 8. In the interim, the position shall be filled by an appointee of the Board of Directors.

## 6. *Executive Officers*

The chief executive officer to the Council shall be a President, who shall be a salaried officer, appointed by the Board of Directors and serving at its pleasure. The President shall serve as an ex-officio member of the Board of Directors without a vote.

## 7. *Duties and Powers of the Board of Directors*

In addition to the duties and powers vested in the Board of Directors elsewhere in this Constitution, the Board of Directors may specifically employ such staff and establish such offices as may seem necessary; incorporate; undertake itself, or through its agents, to raise funds for the Council and to accept and expend monies for the Council; take initiative and act for the Council in all matters including matters of policy and public statement except where limited by this Constitution or by actions of the Council.

## 8. *Committees*

In addition to the Board of Directors, there shall be an Executive Committee of the Board of Directors, a Nominating Committee, a Committee on Membership, whose members shall not be members of the Board of Directors, and such other standing committees as may be established by the Board of Directors.

Except for the Executive Committee and the Nominating Committee, all standing committees and ad hoc committees shall be appointed by the Chairman with the advice and consent of the Board of Directors. Committee membership shall be limited to regular members of the Council.

The Executive Committee shall consist of the Chairman, Past Chairman, and Chairman-Elect and two other Board members elected annually by the Board of Directors. The President of the Council shall be an ex-officio member of the Executive Committee.

To the extent determined by the Board, the Executive Committee shall have the authority of the Board in the management of the affairs of the Council in the intervals between meetings of the Board. The actions of the Executive Committee shall be reported at the next meeting of the Board of Directors.

The Nominating Committee shall consist of five new members each year of whom three shall be elected by the members of the Council. Two shall be members of the Board of Directors. The Chairman of the Committee shall be the Past Chairman of the Board. The one other Board member shall be elected by the Board from its members-at-large who shall be in the last year of their terms.

At least sixty-one days before each Annual Meeting of the Council, the Nominating Committee shall propose to the members of the Council two nominees for each member-at-large position of the Board of Directors to be filled including residual terms of vacated positions, and two nominees for each member-at-large position of the Nominating Committee. These nominations shall be made only after suggestions accompanied by supporting vitae have been solicited from the membership-at-large.

The election will then be held by mail ballot and the nominees receiving the larger number of votes for the position to be filled shall be declared elected. In case of a tie vote, the Nominating Committee shall break the tie.

### *9. Meetings*

The Council shall hold an Annual Meeting at a time and place determined by the Board of Directors. The Council may meet at other times on call of the Board of Directors.

The Board of Directors shall be responsible for the agenda for meetings of the Council. Reports and proposals to be submitted for action by the Council shall be filed with the Board of Directors before they may be submitted for general discussion by the Council. No legitimate report on proposal may be blocked from presentation to the Council, but action on any proposal may not be taken until the Board of Directors has had an opportunity to make a recommendation.

In matters not provided for in this Constitution, parliamentary procedure shall be governed by Robert's Rules of Order, Revised.

### *10. Limitation of Powers*

No act of the Council shall be held to control the policy or line of action of any member institution.

### *11. Dues*

Membership dues shall be proposed by the Board of Directors and must be approved by the majority of the membership after due notice.

### *12. Amendments*

Amendments to this Constitution may be proposed by the Board of Directors or by written petition of one-third of the members. However they originate, proposals for amendments shall be received by the Board of Directors and forwarded with recommendations to the members, in writing, at least ninety days before the meeting at which they are to be voted upon or before formal submission to the members for a mail ballot. To be adopted, proposed amendments must receive the approval of a two-thirds majority of the members voting at the announced meeting or on the designated mail ballot.

### *13. Bylaws*

Bylaws may be established by the Board of Directors at any regular or special meeting, subject to ratification by a simple majority vote of the Council at the next Annual Meeting.

## BYLAWS

1. In conformity with Article 6 of the Constitution, the President of the Council of Graduate Schools in the United States shall be paid an annual salary to be determined by the Board of Directors plus such perquisites as may be necessary for the proper conduct of the office and such travel as may be deemed essential. The President is authorized to employ such personnel as necessary for the proper conduct of the office, to establish bank accounts in the name of the Council of Graduate Schools in the United States, and to draw checks and invest monies against the Council's account or accounts, subject to an annual audit of the books of the Council by a Certified Public Accountant and approval by the Board of Directors.
2. Depositories for funds of the Council shall be designated by the Board of Directors.
3. In the event of the dissolution of the Council of Graduate Schools, all then existing assets of the Council shall be distributed in equal parts to the institutions which will at the time be members of the Council.
4. The fiscal year of the Council will correspond to the calendar year.
5. In the event of the death or disability of the President of the Council, the Chairman shall immediately call a meeting of the Board of Directors to select an Acting President, who shall assume the responsibilities of the President, as they are specified in Article 6 of the Constitution and in Bylaws 1 and 2, until the appointment of a new President.

6. Regular membership applicants responding to Section 3 of the Constitution are expected to furnish statements endorsed by the chief executive officer and the chief graduate officer of their institutions. These statements shall include information as to the following:
   a) The institution's accreditation for graduate work as determined by the appropriate regional accrediting association.
   b) The number of graduate degrees awarded in the three years immediately preceding the application for each applicable field or discipline in which graduate degrees are awarded.
   c) A general description of the criteria used in determining faculty participation in graduate programs, i.e., the level of training and the scholarly/creative productivity of the faculty members in the institution's graduate program.
   d) The degree of centrality of graduate education to the nature and purpose of the institution as evidenced by its budgetary commitment to graduate programs, the existence of special facilities or resources in specific support of graduate education, and, in the case of appointments, promotion and tenure, the degree of importance placed on faculty contributions to graduate and scholarly/creative work.
   e) The extent of the institution's acceptance of existing Council policy statements, setting forth standards for the organization of graduate study.
7. Materials and information requested from the chief administrative officer of organizations applying for Sustaining Membership should include a statement of the aims and objectives of their organizations; a statement of interest in graduate study; documentation of engagement in or commitment to research and development, creative expression, or the exploration of ideas; characterization of the educational level and achievements of the organization's professional staff; identification of affiliations with other associations or institutes relevant to graduate education; and a statement showing prior support of higher education.

   Applicant organizations must have been in existence for a period of time sufficient to establish the above commitments.

   Applicants agree to accept existing Council policy statements setting forth standards for graduate study and allied concerns.
8. A regional organization of graduate schools which becomes associated with the Council of Graduate Schools in the United States shall be known as a CGS affiliate. Eligibility for CGS affiliate status is limited to a) existing regional organizations of graduate schools or b) any such organizations subsequently established and having membership of at least 50 institutions. An eligible organization becomes a CGS affiliate upon approval by CGS's Board of Directors of a letter from a duly authorized officer at that organization stating its intent to become an affiliate. No fee is required to become a CGS affiliate. Formal participation of the regional associations in CGS shall be provided through the Board nomination and election process in such a way that a

representative of at least one institution in each of the affiliated regional associations, who otherwise meet CGS's constitutional requirements for Board membership, is a member of the Board. One such member may then be designated by each affiliate as its liaison member, who shall have, as an extra responsibility beyond that of regular Board membership, to communicate information and views between the Board and the officers of the affiliate. (Alternatively, a regional organization which is an affiliate of the Council may designate as its liaison representative an individual who is not a Board member.) Such communication does not preclude direct communication between CGS and officers of the affiliates. A liaison member may or may not be an officer of the affiliate and is free to act on any Board decision independent of any position described by his or her affiliate. In determining any joint position held by CGS and its affiliates, the governing bodies of each must have adopted such a position through their own procedures. When agreement has been reached, CGS shall be able to represent the position as one held in common by CGS and its affiliates.

Section 10 of the Constitution of CGS shall apply to any such determination.

## PROCEDURAL POLICIES

1. Annual meetings of the Council shall be held during or near the first week of December.
2. If a member resigns, it must reapply for admission in the normal way if it wishes to resume membership.
3. Institutions accepted to membership in any given year are required to pay prorated dues on a quarterly basis for that fiscal year.

## Alphabetical Listing of Member Institutions

Abilene Christian University
Adelphi University
Air Force Institute of Technology
Alabama A&M University
Alfred University
*American University, The
Andrews University
Angelo State University
Appalachian State University
Arizona State University
Arkansas State University
Assumption College
Atlanta University
Auburn University
Austin Peay State University
Ball State University
Baylor College of Medicine
Baylor University
Bentley College
*Boston College
Boston University
Bowling Green State University
Bradley University
*Brandeis University
Bridgewater State College
Brigham Young University
Brooklyn College of CUNY
*Brown University
*Bryn Mawr College
*California Institute of Technology
California State College, Stanislaus
California State Polytechnic University, Pomona
California State University, Fresno
California State University, Fullerton
California State University, Hayward
California State University, Long Beach
California State University, Los Angeles
California State University, Northridge
California State University, Sacramento
California University of Pennsylvania
*Case Western Reserve University
*Catholic University of America
Central Michigan University
Central Missouri State University
Central State University
Central Washington University
Chicago State University
City College of the City University of New York
City University of New York
*Claremont Graduate School, The
*Clark University
Clarkson University
Clemson University
Cleveland State University
College of Notre Dame
College of New Rochelle
College of St. Rose
College of William and Mary
Colorado School of Mines
Colorado State University
*Columbia University
*Cornell University
Creighton University
Dartmouth College
Drake University
Drexel University
*Duke University
Duquesne University
East Central University
East Carolina University
East Tennessee State University
East Texas State University

Eastern Illinois University
Eastern Kentucky University
Eastern Michigan University
Eastern Washington University
*Emory University
Emporia State University
Fairleigh Dickinson University
Fielding Institute
Fitchburg State College
Florida A&M University
Florida Atlantic University
Florida International University
*Florida State University
*Fordham University
Fort Hays State University
Framingham State University
Gallaudet College
Gannon University
George Mason University
*George Washington University, The
*Georgetown University
*Georgia Institute of Technology
Georgia Southern College
Georgia State University
Hahnemann University
Hampton Institute
Hardin-Simmons University
*Harvard University
Hebrew Union College-Jewish Institute of Religion
Hofstra University
Holy Names College
Howard University
Idaho State University
*Illinois Institute of Technology
Illinois State University
Indiana State University
Indiana University
*Indiana University of Pennsylvania
Inter-American University of Puerto Rico
Iona College
*Iowa State University
Jackson State University
James Madison University
John Carroll University
John Jay College of Criminal Justice
*Johns Hopkins University, The
*Kansas State University
Kent State University
Lamar University
*Lehigh University
Lesley College
Loma Linda University
*Louisana State University
Louisana State University Medical Center School of Graduate Studies
Loyola Marymount University
*Loyola University of Chicago
Mankato State University
Marquette University
Marshall University
*Massachusetts Institute of Technology
Medical College of Georgia
Medical College of Pennsylvania
Medical College of Wisconsin
Medical College of South Carolina
Memphis State University
Miami University
*Michigan State University
Michigan Technological University
Middle Tennessee State University
Mississippi State University
Montana State University
Montclair State College
Morehead State University
Morgan State University
Murray State University
National University
Naval Postgraduate School
New Jersey Institute of Technology
New Mexico Institute of Mining and Technology
New Mexico State University
*New School for Social Research

New York Institute of Technology
New York Medical College
*New York University
North Carolina Agricultural and Technical State University
North Carolina Central University
*North Carolina State University at Raleigh
North Dakota State University
North Texas State University
Northeast Missouri State University
Northeastern Illinois University
Northeastern University
Northern Arizona University
Northern Illinois University
Northern Michigan University
Northwestern State University of Louisana
*Northwestern University
Nova University
Oakland University
*Ohio State University, The
Ohio University
*Oklahoma State University
Old Dominion University
*Oregon State University
Pace University
*Pennsylvania State University, The
*Pepperdine University
Pittsburg State University
Polytechnic Institute of New York
*Princeton University
*Purdue University
Queens College of The City University of New York
Radford University
*Rensselaer Polytechnic Institute
*Rice University
Rochester Institute of Technology
*Rockefeller University, The
Roosevelt University
*Rutgers-The State University
St. Bonaventure University
*St. John's University
*St. Louis University
St. Mary's University
Salisbury State College
Sam Houston State University
San Diego State University
San Francisco State University
Sangamon State University
San Jose State University
Santa Clara University
Sarah Lawrence College
Seattle University
Shippensburg University
South Carolina State College
South Dakota School of Mines and Technology
South Dakota State University
Southeastern Louisana University
Southern Illinois University at Carbondale
Southern Illinois University at Edwardsville
Southern Methodist University
Southern University
Southwest Missouri State University
Southwest Texas State University
*Stanford University
State University of New York at Albany
State University of New York at Binghamton
*State University of New York at Buffalo
State University of New York at Stony Brook
State University of New York Downstate Medical Center
State University of New York Upstate Medical Center
Stephen F. Austin State University
Stetson University
Stevens Institute of Technology
*Syracuse University
*Temple University

Tennessee State University
Tennessee Technological University
*Texas A&M University
Texas Christian University
Texas Southern University
Texas Tech University
Texas Woman's University
Thomas Jefferson University
Towson State University
Trinity University
Tufts University
*Tulane University
United States International University
University of Akron
*University of Alabama
University of Alabama at Birmingham
University of Alabama in Huntsville
University of Alaska
*University of Arizona
University of Arkansas
University of Arkansas at Little Rock
University of Baltimore
University of Bridgeport
*University of California, Berkeley
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
University of California, San Francisco
University of California, Santa Barbara
University of Central Florida
*University of Chicago
University of Cincinnati
*University of Colorado
University of Colorado at Denver
University of Connecticut
University of Dayton
*University of Delaware
*University of Denver
University of the District of Columbia
University of Evansville
*University of Florida
University of Georgia
University of Hartford
University of Hawaii at Manoa
University of Health Sciences/The Chicago Medical School
University of Houston
University of Houston-Clear Lake
University of Idaho
University of Illinois at Chicago
*University of Illinios at Urbana-Champaign
*University of Iowa
*University of Kansas
*University of Kentucky
University of Louisville
University of Lowell
University of Maine at Orono
*University of Maryland
University of Maryland at Baltimore
University of Maryland Baltimore County
University of Maryland College Park
University of Maryland Eastern Shore
University of Maryland University College
University of Massachusetts at Amherst
University of Massachusetts at Boston
University of Medicine & Dentistry of New Jersey/Graduate School of Biomedical Sciences
University of Miami
*University of Michigan
University of Minnesota

University of Mississippi
University of Missouri-Columbia
University of Missouri-Kansas City
University of Missouri-Rolla
University of Missouri-St. Louis
University of Montana
*University of Nebraska
University of Nevada-Las Vegas
University of Nevada-Reno
University of New Hampshire
University of New Haven
University of New Mexico
University of New Orleans
*University of North Carolina at Chapel Hill
University of North Carolina at Charlotte
University of North Carolina at Greensboro
*University of North Dakota
University of Northern Colorado
University of Northern Iowa
*University of Notre Dame
*University of Oklahoma
*University of Oregon
University of the Pacific
*University of Pennsylvania
*University of Pittsburgh
University of Puerto Rico, Mayaguez
University of Puerto Rico, Rio Piedras
University of Rhode Island
*University of Rochester
University of Scranton
University of South Alabama
University of South Carolina
University of South Dakota
University of South Florida
*University of Southern California
University of Southern Maine
*University of Southern Mississippi
University of Southwestern Louisiana
University of Tennessee at Chattanooga
University of Tennessee at Knoxville
University of Tennessee at Martin
University of Tennessee Center for The Health Sciences
University of Texas at Arlington
*University of Texas at Austin
University of Texas at Dallas
University of Texas at El Paso
University of Texas at San Antonio
University of Texas at Tyler
University of Texas Graduate School of Biomedical Sciences at Galveston
University of Texas Health Science Center at Houston Graduate School of Biomedical Sciences
University of Texas Graduate School of Biomedical Sciences at San Antonio
University of Toledo
University of Tulsa
*University of Utah
University of Vermont
*University of Virginia
*University of Washington
University of Wisconsin-Eau Claire
*University of Wisconsin-Madison
University of Wisconsin-Milwaukee
University of Wisconsin-Oshkosh
University of Wisconsin-Stout
*University of Wyoming
Utah State University
*Vanderbilt University
Villanova University
Virginia Commonwealth University
*Virginia Polytechnic Institute and State University
Wake Forest University
*Washington State University
Washington University
*Wayne State College

Wayne State University
Wesleyan University
West Chester University
*West Virginia University
Western Carolina University
Western Illinois University
Western Kentucky University
Western Michigan University
Western Washington University
Westfield State College
Wichita State University
Worcester Polytechnic Institute
Worcester State College
Wright State University
Xavier University
*Yale University
Yeshiva University
Youngstown State University

*Founding Institutions

## SUSTAINING MEMBERS

Educational Testing Service
Princeton, New Jersey

University Microfilms International
Ann Arbor, Michigan

Research Corporation
Tucson, Arizona